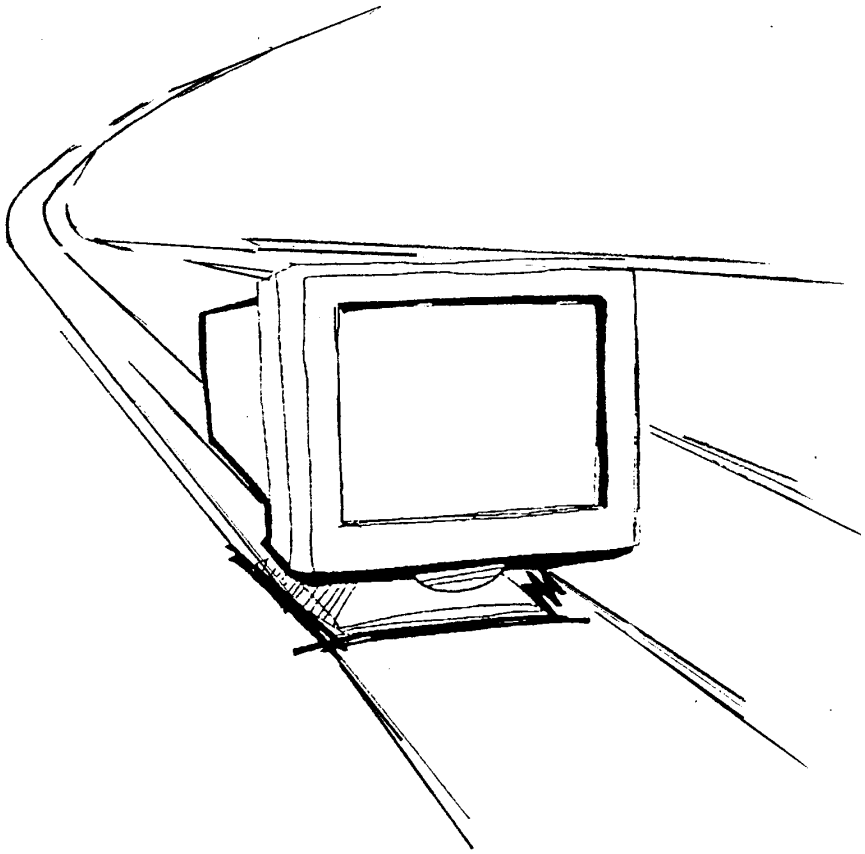
EX-710F

SERVICE MANUAL



CTX The Monitor Specialists

EDITION 1
JAN. 2001

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1.0 IMPORTANT NOTICE & INTRODUCTION & SAFETY NOTICE

IMPORTANT NOTICE

Please read before attempting service

1. While the monitor is in operation, do not attempt to connect or disconnect any wires.

2. Make sure the power cord is disconnected before replacing any parts in the monitor.

3. When the power is on, do not attempt to short any portion of the circuit. This shorting may cause damage to the components in the monitor.

4. When servicing the H.V. area, be certain that the C.R.T anode is safely discharged before removing the anode cap.

5. Caution must exercised when servicing this monitor.

INTRODUCTION

Enhanced repair capabilities

This Service Manual is edited for model CFA1797B when service is necessary. there are four primary parts included in this troubleshooting guide which offer the easiest way to locate problem points and repair the machine to the best possible condition.

1. The Adjustment Section offers the adjustable method, steps and all data of the factory's initial settings which can make the machine get the best performance at that time. By the way, before adjusting, the machine must be warmed up for at least 10 minutes and the CRT face must be in an east ward direction.

2. The Troubleshooting Section has five main parts including: power supply, micon circuit, CRT, deflection & video circuit. Each offers fast repair routine and the IC, transistor voltage records against all specified signal modes. These voltage readings are measured with a HP 34401A multimeter with input impedance 10M (0.1V~1000V range) and waveforms shown on circuit schematics

   are measured by a Tektronix TDS 520 digital oscilloscope, the monitor receives VGA-480 full white square pattern.

3. The Spare parts list offers the CTX part number (P/N) which is used frequently by repairmen / technicians. For details please refer to the service guide or service manual. If there is any engineering change regarding this model, CTX will issue the updated information by a non-periodical Technical Bulletin.

4. The transistor voltage records are measured from LEFT side to RIGHT side when face to the front (printed side) of transistor.

SAFETY PRECAUTIONS

NOTICE: Comply with all cautions and safety related notes located on or inside the cabinet and on the chassis or picture tube.

The following precautions should be observed.

1. Do not install, remove, or handle the picture tube in any manner unless shatterproof goggles are worn. People not so equipped should be kept away while picture tubes are handled. Keep picture tube away from the body while handling.

2. When replacing a chassis in the monitor, all the protective devices must be put back in place, such as barriers, non-metallic knobs, adjustment and compartment shields, and isolation resistor-capacitor, etc..

3. When service is required, observe the original lead dress. Extra precaution should be taken to assure correct lead dress in the high voltage circuitry area.

4. Always use the manufacturer's replacement components. Especially critical components as indicated on the Replacement parts list should not be replaced by other manufacturer's Furthermore where a short circuit has occurred, replace those components that indicate evidence of overheating.

5. Before returning a serviced monitor to the customer, the service technician must thoroughly test the unit to be certain that it is completely safe to operate without danger of electrical shock, and be sure that no protective device built into the monitor by the manufacturer has become defective, or inadvertently defeated during servicing. Therefore, the following checks should be performed for continued protection of the customer and service technician.

High Voltage

This monitor is provided with a high voltage hold down circuit for clearly indicating that voltage has increased in excess of a predetermined value. Comply with all notes described in this Service Manual regarding this hold down circuit when servicing, so that this hold down circuit may function correctly.

Service Warning

With minimum Brightness and Contrast the operation high voltage in this display is lower than 27KV.

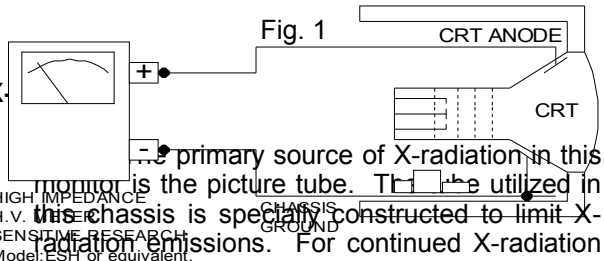
If any component having influence on the high voltage is replaced, confirm that the high voltage with minimum Brightness and Contrast is lower than 27KV. To measure high voltage use a high impedance high-voltage meter. (SENSITIVE RESEARCH Model: ESH or Equivalent) Connect (-) to chassis earth and (+) to the CRT anode button. (See the following connection diagram Fig. 1).

NOTE:

1) Turn power switch off without fail before making the connection to the Anode button.

2) Before turn power switch ON, confirm the AC line voltage, set the “Voltage Selector”.

Fig. 1



X-RADIATION

The primary source of X-radiation in this monitor is the picture tube. The tube utilized in this chassis is specially constructed to limit X-radiation emissions. For continued X-radiation protection, the replacement tube must be the same type as the original, manufacturer approved type. When troubleshooting and making test measurements in a monitor with a problem of excessive high voltage, avoid being unnecessarily close to the picture tube and the high voltage components. Do not operate the chassis longer than is necessary to locate the cause of excessive voltage.

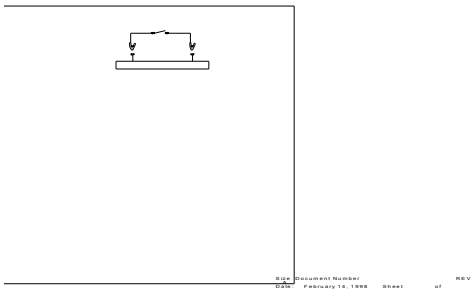
CHECK OF HIGH VOLTAGE HOLD DOWN CIRCUIT

Checking of the high voltage hold down circuit operation.

1. Turn the switch of the unit ON.

2. Set Brightness, Contrast controls to max..

3. Short the two pins of P402 as shown in Fig. 2. The picture should disappear immediately.



P402

Main Board Assembly

Fig. 2

4. Turn the switch of the unit OFF.

PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the color monitor units have special safety related characteristics.

These are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc.. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with “!” on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the manufacturer recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, X-radiation, or other hazards.

TECHNICIAN NOTICE

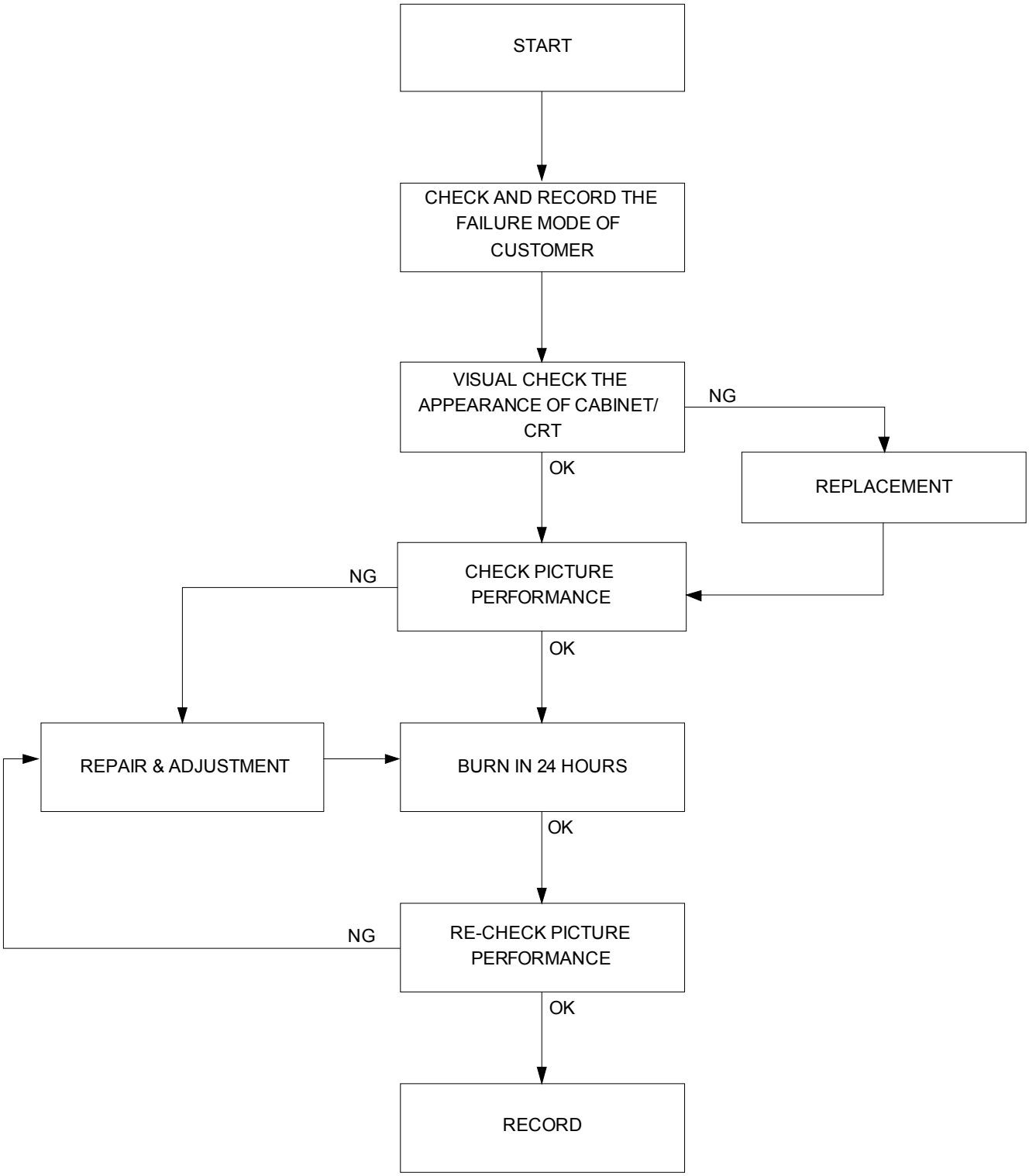
Please read before you attempt to repairing or measure component, please use the way to get best safety.

1. Pull the AC plug directly. When power

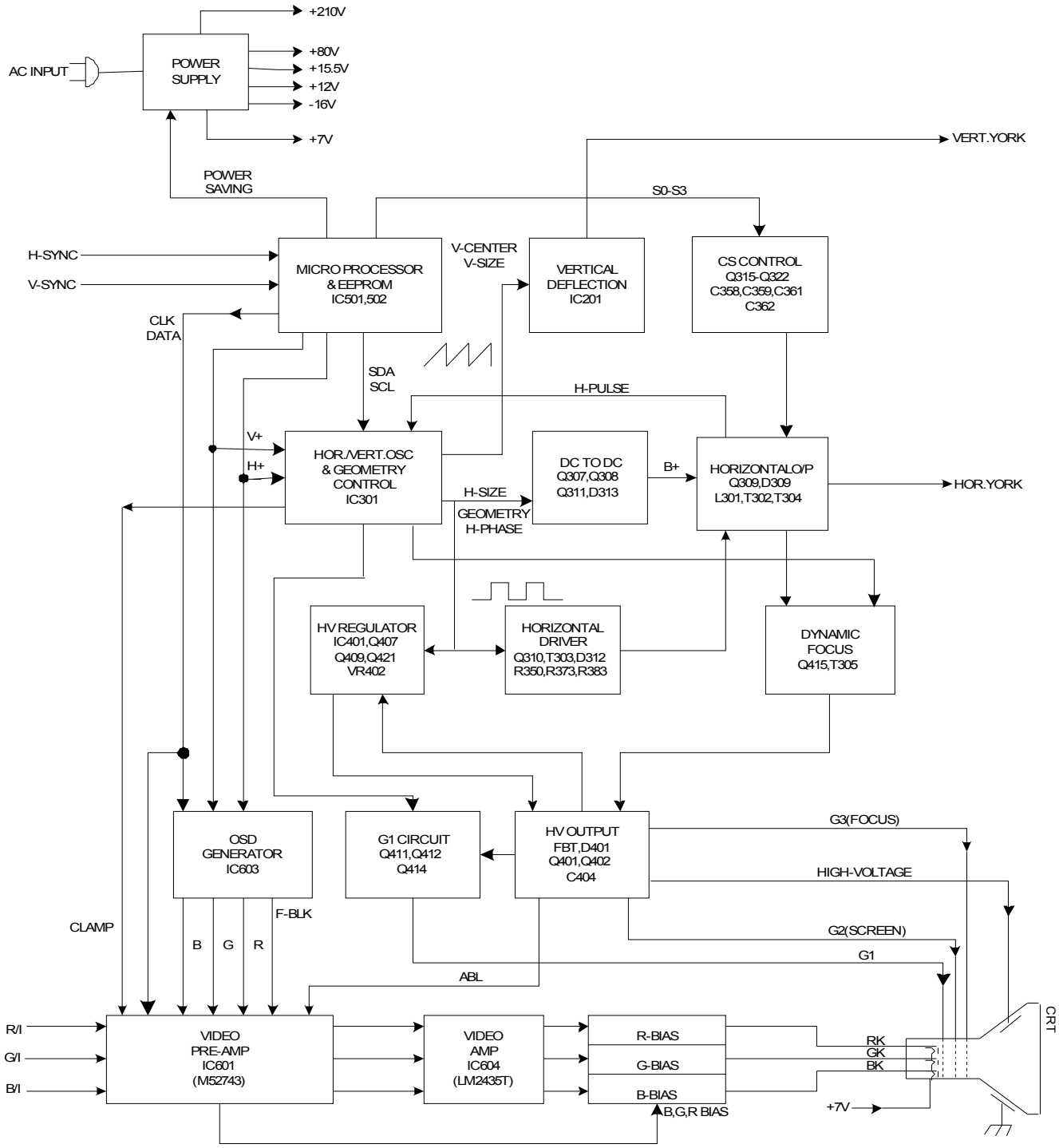
switch is still on, approximately 5 sec the energy of C104 could be discharged quickly.

2. If you turn off power switch first, then you pull the AC plug the energy of C104 will be discharged very slowly; about 1sec discharge 1 volt. It needs 5 minutes to discharge.

2.0 GENERAL MAINTENANCE PROCEDURE



3.0 FUNCTION BLOCK DIAGRAM



4.0 DESCRIPTION OF CIRCUIT

1. Power supply circuit

The AC voltage input connected to EMI circuit and rectifier circuit. R102, R112 and Switch (SW101) will provide DC voltage to IC101, when switch on. While IC101 works normal, The IC101 will Auto-detect output voltage of power supply from Pin2 and correct the duty cycle of Pin6 output pulse to compensate the variation of output voltage.

The output of IC101 Pin6 connected to power MOSEFET to drive the power transformer T101. When power MOSFET is on, the energy stored in the primary winding of T101. Once MOSEFET is off, the energy transfer to the secondary and charges the output capacitor to get the stable DC voltage.

2. Oscillation circuit

The functions H-size, H-phase, V-size, V-center, Side-pin, Parallel….are designed inside into IC301. The Pin25 is X-RAY protect input. When H.V output circuit is abnormal (H.V too high) the X-RAY protect circuit will shut off the horizontal output, H.V. also will be shut down. The Pin28 is B^+ control driver output. The Pin26 is horizontal square wave output drives horizontal output. The Pin24 is parabolic output. The Pin23 is vertical output. The Pin1 & pin2 are H-SYNC & V-SYNC input. The Pin3 is vertical blanking output. The Pin 20, 22 for vertical oscillator. The Pin 6, 8 for horizontal oscillator.

3. Vertical output circuit

The Pin23 of IC301 is vertical sync output connected to IC201 (Amplifier), Pin5 of IC201 is vertical amplifier output drives the vertical deflection directly.

4. Horizontal output circuit

The DC-DC is to generate a DC voltage (B^+) for horizontal output circuit. The CPU (IC501) controls the H. size adjustment function of IC301 via the I^2C Bus. The output of IC301 (Pin6) connected to gate of Q311 to make the Q311 switching. When Q311 is ON, the energy stored in T304 and the energy released via D313 when Q311 turned OFF. The B^+ applied to Horizontal Yoke and supply the power for horizontal deflection. The more the B^+ will get the bigger the horizontal size.

5. Micon circuit

The IC501 (CPU) will detect polarity and frequency of input H.V. Sync. The CPU will determine the mode of input timing (preset or users mode) and load mode data from IC502 (EEPROM). The outputs of IC501 were connected to other function circuit (IE. H-size, H-phase, V-size, and V-center…). Also, the user can adjust picture from keyboard and the data will be saved into IC502 automatically. For the O.S.D. mode, when O.S.D. manual is active CPU will inform the O.S.D IC (IC603) to send O.S.D BLK signal to blank the video signal from VGA card, and the O.S.D. IC will send O.S.D. R.G.B. Video signal to show the O.S.D. manual on screen.

6. H.V. regulation circuit

The IC401 is a P.W.M IC; Pin6 is P.W.M output, which connected to Q407, Q409. The Q402 is H.V. output switching transistor. Q401 and D401 are damper device provide the path of damper current. Q421 is a feedback voltage from FBT Pin13 connected to PIN2 (IC401) and correct the duty cycle of PIN6 output pulse.

7. Video output circuit

Video circuit consists of video preamplifier IC601 and output cascade amplifier IC604. IC601 is a video processing IC equipped with three DC amplifiers to pre-amplify R.G.B. signals from 0.7V to 4.2V.

The R.G.B. GAIN & BIAS control signal are from IC501 via I^2C-bus to DAC IC601. The IC601 control to video gain. The output of pin 24, 25, 26 are connected to BIAS circuit of each R.G.B. signal's amplification and thus achieve a well balance able white picture.

The O.S.D. R.G.B. (Pin4, 9,13 of IC601) is the input of O.S.D. Video signal. The IC604 is R.G.B. drive to capable of driving CRT.

1.0 TIMING MODE (CTX presetting Timing)

NAME	720X400-70		640X480-60		800X600-75		800x600-85		MAC II-832	
PIXEL CLOCK	28.322 MHz		25.175 MHz		49.500 MHz		56.250 MHz		57.284MKz	
Fh	31.469 kHz		31.469 kHz		46.875 kHz		53.674 kHz		49.726MKz	
Fv	70.087 HZ		59.941 HZ		75.000 HZ		85.062 HZ		74.552Hz	
INTERLACE MODE	NO		NO		NO		NO		NO	
VIDEO	ANALOG-COLOR		ANALOG COLOR		ANALOG COLOR		ANALOG COLOR		ANALOG COLOR	
XS SYNC ON GREEN	NO		NO		NO		NO		NO	
VIDEO LEVEL	700mv		700mv		700mv		700mv		700mv	
WHITE LEVEL	700mv		700mv		700mv		700mv		700mv	
BLANK LEVEL	0 IRE		0 IRE		0 IRE		0 IRE		0 IRE	
16 BIT HEX DATA	0000		0000		0000		0000		0000	
UNIT OF DATA	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms
H TOTAL	900	31.777us	800	31.778us	1056	21.333us	1048	18.631us	1152	20.110us
H DISPLAY	720	25.422us	640	25.422us	800	16.162us	800	14.222us	832	14.524us
H B-PORCH	54	1.907 us	48	1.907 us	160	3.232 us	152	2.702 us	224	3.910us
H-S-WIDTH	108	3.813 us	96	3.813 us	80	1.610 us	64	1.138 us	64	1.117us
H BORDER	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000us
H SIZE	4.000mm		4.000mm		4.000mm		4.000mm		4.000mm	
V TOTAL	449	14.268ms	525	16.683ms	625	13.333ms	631	11.756ms	667	13.413ms
V DISPLAY	400	12.711ms	480	15.253ms	600	12.800ms	600	11.179ms	624	12.549ms
V B-PORCH	35	1.112 ms	33	1.049 ms	21	0.448 ms	27	0.503 ms	39	0.784ms
V S WIDTH	2	0.064 ms	2	0.064 ms	3	0.064 ms	3	0.056 ms	3	0.060ms
V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000ms
V SIZE	3.000mm		3.000mm		3.000mm		3.000mm		3.000mm	
H S OUTPUT	ON(-)		ON(-)		ON(+)		ON(+)		Off-Low	
V S OUTPUT	ON(+)		ON(-)		ON(+)		ON(+)		Off-Low	
X S OUTPUT	ON(-)		ON(-)		ON(+)		ON(+)		ON(-)	
X S SELECT	H		H		H		H		H+V	

NAME	1024x768-75		1024X768-85		1152X864-75		1280X1024-75		1280X1024-85	
PIXEL CLOCK	78.751MHZ		94.500MHZ		108.000MHZ		135.000MHZ		157.500MHZ	
Fh	60.024KHZ		68.677KHZ		67.500KHZ		79.976KHZ		91.146KHZ	
Fv	75.030HZ		84.996HZ		75.000HZ		75.024HZ		85.240HZ	
INTERLACE MODE	NO		NO		NO		NO		NO	
VIDEO	ANALOG-COLOR		ANALOG COLOR		ANALOG-COLOR		ANALOG COLOR		ANALOG-COLOR	
XS SYNC ON GREEN	NO		NO		NO		NO		NO	
VIDEO LEVEL	700mv		700mv		700mv		700mv		700mv	
WHITE LEVEL	700mv		700mv		700mv		700mv		700mv	
BLANK LEVEL	0 IRE		0 IRE		0 IRE		0 IRE		O IRE	
16 BIT HEX DATA	0000		0000		0000		0000		0000	
UNIT OF DATA	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms	PIXEL	us/ms
H TOTAL	1312	16.660us	1376	14.561us	1600	14.815us	1688	12.504us	1728	10.971us
H DISPLAY	1024	13.003us	1024	10.836us	1152	10.667us	1280	9.481us	1280	8.127us
H B-PORCH	176	2.235us	208	2.201 us	256	2.370 us	248	1.837 us	224	1.422 us
H-S-WIDTH	96	1.219us	96	1.016 us	128	1.185 us	144	1.067 us	160	1.016 us
H BORDER	0	0.000us	0	0.000 us	0	0.000 us	0	0.000 us	0	0.000 us
H SIZE	4.000mm		4.000 mm		4.000 mm		4.000 mm		4.000 mm	
V TOTAL	800	13.328ms	808	11.765ms	900	13.333ms	1066	13.329ms	1072	11.761ms
V DISPLAY	768	12.795ms	768	11.183ms	864	12.800ms	1024	12.804ms	1024	11.235ms
V B-PORCH	28	0.466ms	36	0.524 ms	32	0.474ms	38	0.475ms	44	0.483ms
V S WIDTH	3	0.050ms	3	0.044 ms	3	0.044ms	3	0.038ms	3	0.033ms
V BORDER	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms	0	0.000 ms
V SIZE	3.000 mm		3.000 mm		3.000 mm		3.000 mm		3.000 mm	
H S OUTPUT	ON(+)		ON(+)		ON(+)		ON(+)		ON(+)	
V S OUTPUT	ON(+)		ON(+)		ON(+)		ON(+)		ON(+)	
X S OUTPUT	ON(+)		ON(+)		ON(+)		ON(+)		ON(+)	
X S SELECT	H		H		H+V		H		H	

6.0 ADJUSTMENT

6.1 CFA1797B ADJUSTMENT

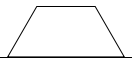
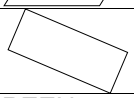
REM: PRESET MODE DATA ADJUSTMENT:

A. Turn off it.

B. Press the ▼ and ▲ at same time which on the external control panel.

C. Turn on it.

Remark: Before adjusting, monitor must warm up 20 minutes and CRT must be degaussed.

ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
210V	VR101	D117"–"=210V±0.2V	VGA-480, X'HATCH
12V	VR102	J82=12V±0.2V	VGA-480, X'HATCH
H.V.	VR402	CRT ANODE=27.0KV±0.2KV	VGA-480, X'HATCH
FREQUENCY	VR103	D112"+"=27±0.1KHz	VGA-480, X'HATCH
V-LINE ≤ 5%	OSD. MANUAL	$\frac{Ymax-Ymin}{Ymax+Ymin}$	VGA-480, X'HATCH
V-SIZE	OSD. MANUAL	V-SIZE=232mm±5 mm	All of PRESET modes, X'HATCH
H-CENTER	VR302	Set Raster at center.IR-LI ≤ 2 mm	1024X768 (80.4KHZ) X'HATCH
H-WIDTH	OSD. MANUAL	H-WIDTH=310mm±5mm	All of PRESET modes, X'HATCH
H-PH ≤ 3mm	OSD. MANUAL	$\frac{\lvert R-L \rvert}{2}$	All of PRESET modes, X'HATCH
V-CE ≤ 3mm	OSD. MANUAL	$\frac{\lvert U-D \rvert}{2}$	All of PRESET modes, X'HATCH
CORNER	OSD. CORNER MANUAL	≤ 0.5mm	All of PRESET modes, X'HATCH
	OSD. SIDE-PIN MANUAL	≤ 2.0mm	All of PRESET modes, X'HATCH
	OSD. BALANCE MANUAL	≤ 1.0mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2.0mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2.5mm	All of PRESET modes, X'HATCH
	OSD. MANUAL	≤ 2mm	All of PRESET modes, X'HATCH
SCREEN	FBT SCREEN VR	The "1" row of color bar pattern is visible when Brightness is DAC50.	VGA-480 COLOR BAR
FOCUS	FBT FOCUS VR	Optimum point	1024X768 68.6KHZ "m"
WHITE BALANCE PRE ADJ	OSD. CONTRAST	MAX (DAC=100)	VGA-480, MOSAIC
	OSD. BRIGHTNESS	CLICK POINT (DAC=100)	VGA-480, MOSAIC
	FBT SCREEN VR	RASTER Y≤1.0FL	VGA-480, MOSAIC
	OSD. R.G.B BIAS	RASTER x=281±10, y=311±10	VGA-480, MOSAIC
	OSD. CONTRAST	MAX (DAC = 100)	VGA-480, MOSAIC
	OSD. BRIGHTNESS	CLICK POINT (DAC = 50)	VGA-480, MOSAIC
	OSD. SUBCONT	MOSAIC Y≤40±5FL	VGA-480, MOSAIC
	OSD R.G.B.GAIN	MOSAIC x=281±10,y = 311±10	VGA-480, MOSAIC

<table>
<tr><th>ADJUSTMENT</th><th>LOCATION</th><th>SPECIFICATION/DESCRIPTION</th><th>TIMING & PATTERN</th></tr>
<tr><td rowspan="4">WHITE BALANCE ADJ</td><td rowspan="3">OSD. R.G.B GAIN</td><td>MODE1(9300°K):x=283±10
:y=297±10</td><td rowspan="4">VGA-480, FULL WHITE</td></tr>
<tr><td>MODE2(6500°K):x=313±10
:y=329±10</td></tr>
<tr><td>MODE3(5000°K):x=346±10
:y=359±10</td></tr>
<tr><td>OSD. R.G.B BIAS</td><td>MODE1(9300°K):x=283±10
:y=297±10
When contrast is in Y ≤ 1 3FL.</td></tr>
<tr><td rowspan="4">BRIGHTNESS SETTING</td><td>OSD. CONTRAST</td><td>MAX (DAC=100)</td><td>VGA-480, COLOR BAR</td></tr>
<tr><td>OSD. BRIGHTNESS</td><td>CLICK POINT (DAC=50)</td><td>VGA-480, COLOR BAR</td></tr>
<tr><td>FBT SCREEN VR</td><td>The “2” row of color bar pattern is just visible.</td><td>VGA-480, COLOR BAR</td></tr>
<tr><td colspan="3">Brightness
reduce
<table>
<tr><th></th><th>BRIGHT BLUE</th><th>BRIGHT RED</th><th>BRIGHT PRUPLE</th><th>GREEN</th><th>BLUE + GREEN</th><th>RED + YELLOW</th><th>WHITE</th><th></th></tr>
<tr><td>15</td><td>R+B</td><td></td><td></td><td>B+G</td><td></td><td>R+G</td><td></td><td>7</td></tr>
<tr><td>14</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>6</td></tr>
<tr><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>5</td></tr>
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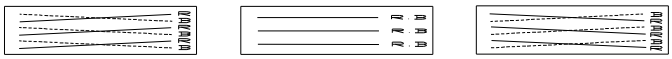
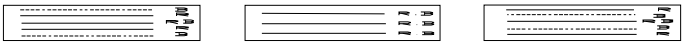
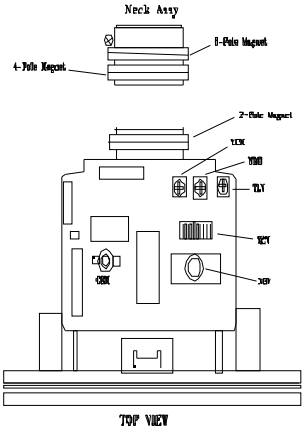
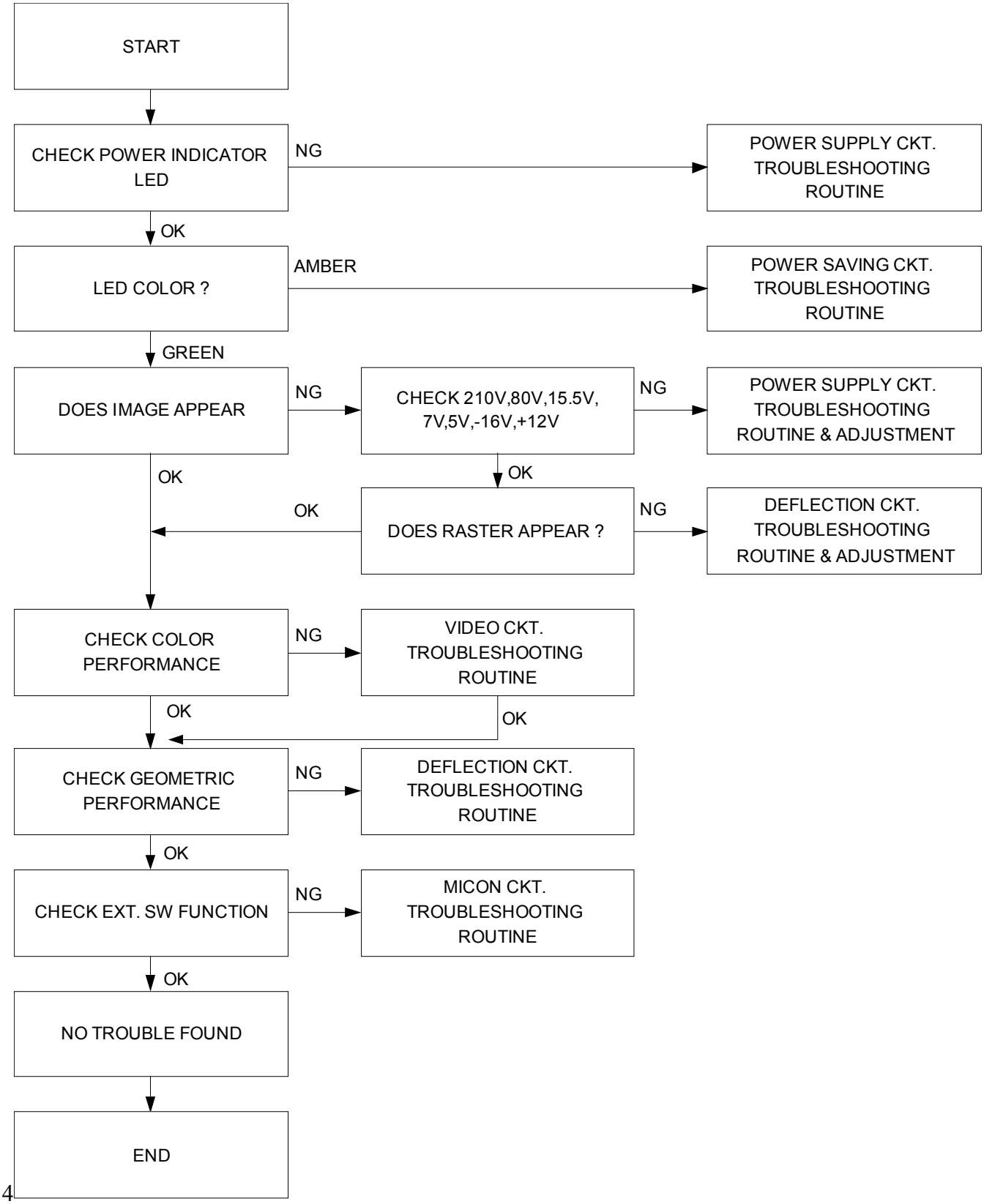
<tr><td>10</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>2 ▶ Visible</td></tr>
<tr><td>9</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1 ▶ visible obscurely</td></tr>
<tr><td>8</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>0</td></tr>
</table></td></tr>
<tr><td rowspan="4">CONVERGENCE</td><td colspan="2">Adjustment location 4-Ploe Magnet
  </td><td>1280X1024-75
H-80KHz. X’HATCH</td></tr>
<tr><td colspan="2">Adjustment location 6-Pole Magnet
  </td><td>1280X1024-75
H-80KHz. X’HATCH</td></tr>
<tr><td colspan="2">Adjustment location XCV
  </td><td>1280X1024-75
H-80KHz. X’HATCH</td></tr>
<tr><td colspan="2">Adjustment location XBV
  </td><td>1280X1024-75
H-80KHz. X’HATCH</td></tr>
</table>

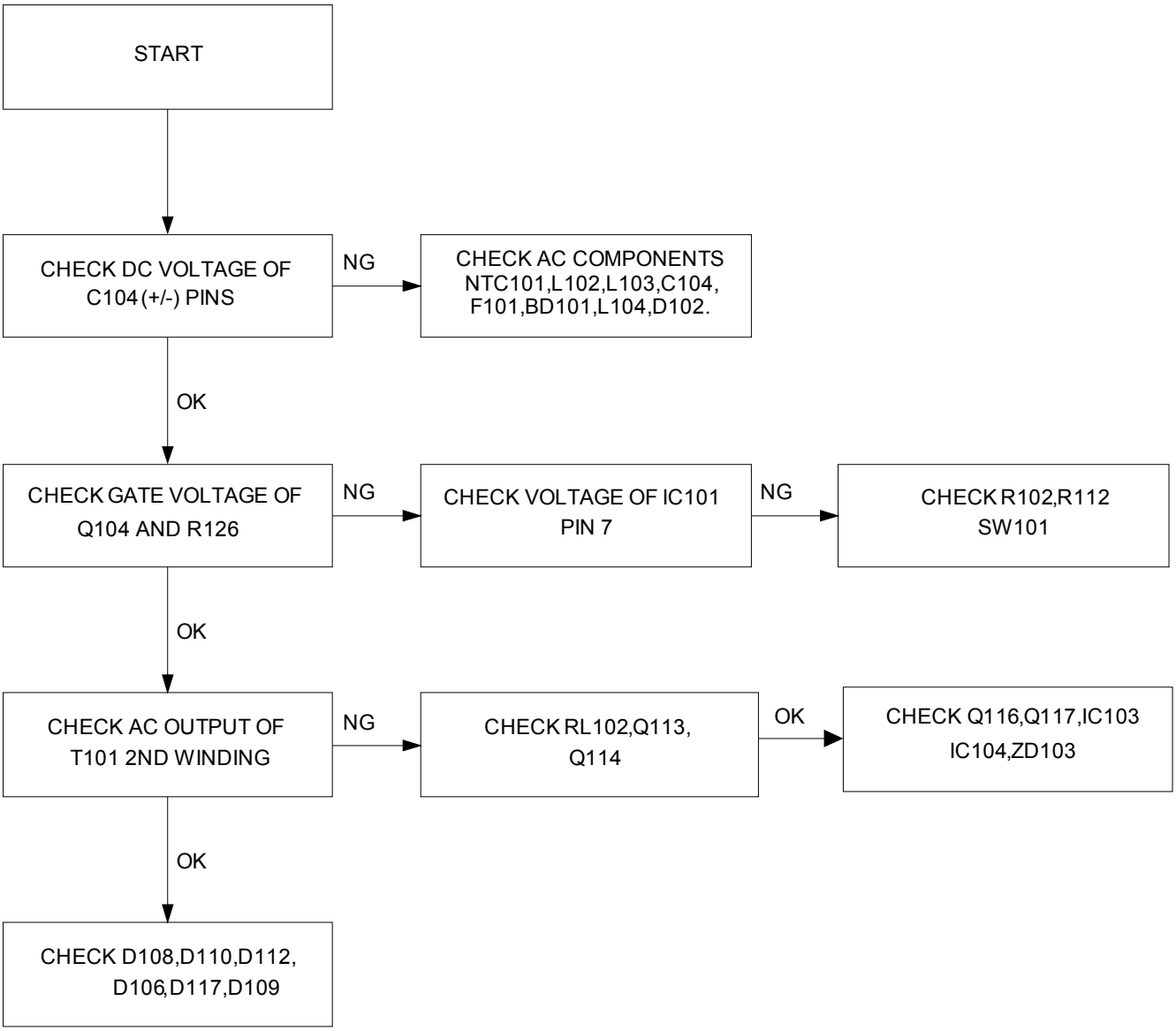
ADJUSTMENT	LOCATION	SPECIFICATION/DESCRIPTION	TIMING & PATTERN
CONVERGENCE	Adjustment location TLV 		1280X1024-75 H-80KHz. X'HATCH
	Adjustment location YCH 		1280X1024-75 H-80KHz. X'HATCH
	Adjustment location YBH 		1280X1024-75 H-80KHz. X'HATCH
			

7.0 TROUBLESHOOTING

7.1 MAIN TROUBLESHOOTING ROUTINE



7.2 POWER SUPPLY CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: TIMING: 640X480-60Hz (31K)
PATTERN: CROSS HATCH

Unit: Volt

IC	IC101 (3842)								Q104(FS10SM-16A)			IC103(PS2561)	
PIN / AC IN	1	2	3	4	5	6	7	8	S	D	G	3	4
110V	3.15	2.51	0.14	2.47	GND	6.21	16.69	5.02	0.14	152.51	5.92	0.95	16.68
220V	3.00	2.52	0.07	2.45	GND	63.02	76.63	5.01	0.07	317.16	2.76	1.39	16.62

4

IC	IC102 (5002L)			IC104 (TL431)			IC501 (68P61A)	
PIN / STATUS	O	G	I	A	K	R	21	22
NORMAL	5.02	GND	6.27	GND	4.31	2.48	4.96	0
SUSPEND	5.02	GND	6.95	GND	3.69	2.48	4.95	4.84
OFF	5.02	GND	6.71	GND	2.80	2.49	0.01	4.84

TR	Q102 (C945)			IC501(68P61A)
PIN / STATUS	E	C	B	26
NORMAL	GND	16.07	0.07	0.14
DEGUASS	GND	0.21	0.76	3.48

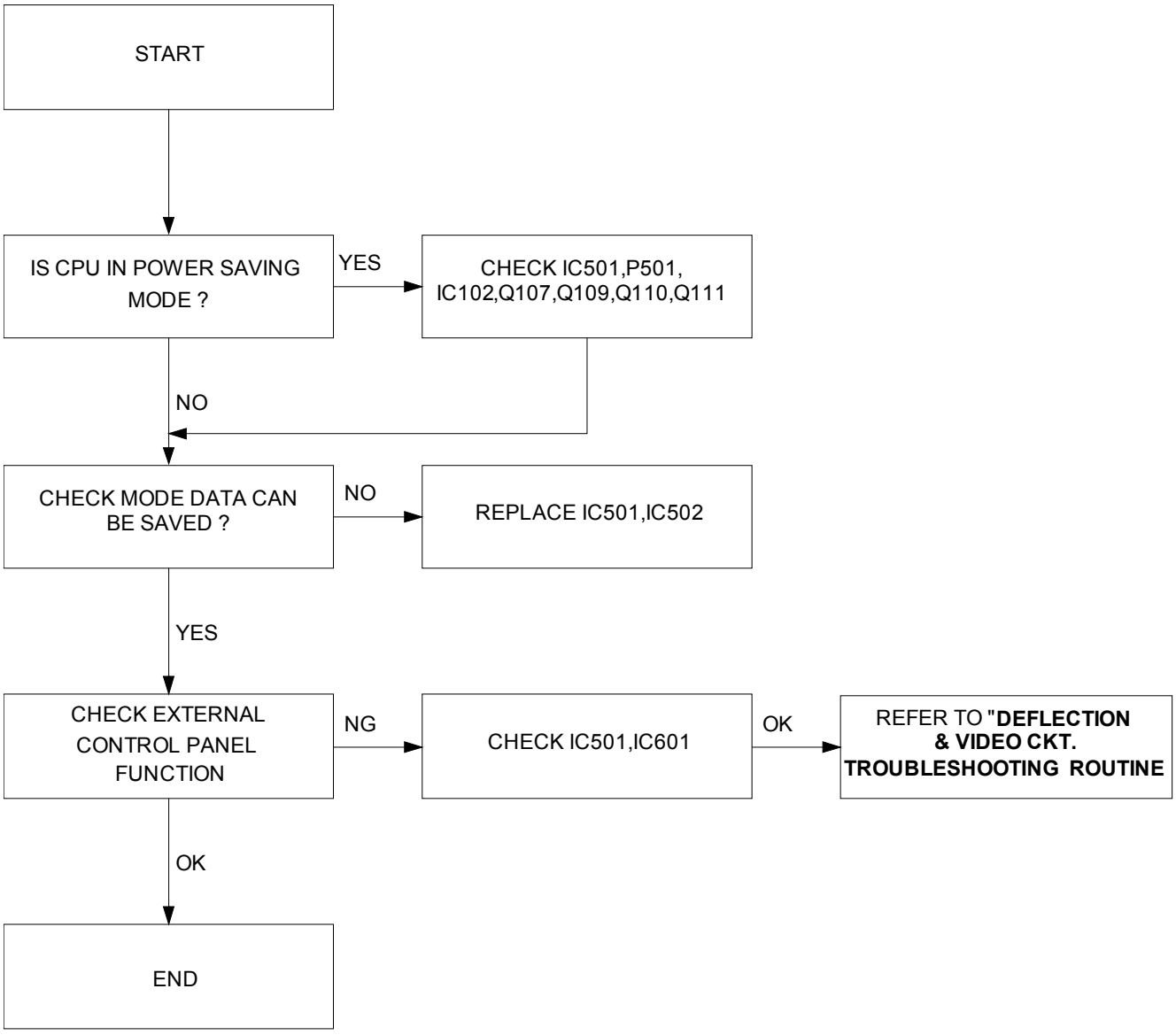
TR/IC	IC103(PS2561)		Q107 (C2001)			Q109 (C945)			Q110 (2SB562)		
PIN / STATUS	1	2	E	C	B	E	C	B	E	C	B
NORMAL	5.36	4.30	12.00	14.10	12.67	6.19	12.68	6.80	6.53	6.35	6.67
SUSPEND	4.76	3.66	0.34	0.70	0.68	0.35	0.71	0.18	6.98	6.78	6.10
OFF	3.91	2.79	0.43	0.64	0.64	0.44	0.65	0.25	6.98	0	6.98

TR	Q111 (C945)			Q113 (C945)			Q114 (C945)			Q116 (A733)		
PIN / STATUS	E	C	B	E	C	B	E	C	B	E	C	B
NORMAL	GND	0.14	0.72	GND	0.09	0.72	GND	0.72	0	6.53	2.48	6.50
SUSPEND	GND	0.15	0.73	GND	6.92	0.01	GND	0	0.66	6.98	6.95	6.32
OFF	GND	6.98	0	GND	6.71	0.01	GND	0	0.67	6.98	6.95	6.33

8

TR	Q117 (C945)		
PIN / STATUS	E	C	B
NORMAL	GND	6.49	0
SUSPEND	GND	0.01	0.64
OFF	GND	0.01	0.64

7.3 MICON CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: AC LINE IN:110V/60Hz
PATTERN: CROSS HATCH
STATUS : NORMAL

4

Unit: Volt

IC	IC501 (68P61A)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)	0.98	0.55	0.96	5.00	5.02	GND	2.69	2.52	5.01	5.01
800X600-85(53K)	0.98	0.55	0.98	5.00	5.02	GND	2.68	2.51	5.01	5.01
1024X768-85(68K)	0.98	0.55	0.98	5.00	5.02	GND	2.69	2.52	5.01	5.01
1280X1024-85(91K)	0.98	0.55	0.98	5.00	5.02	GND	2.69	2.51	5.01	5.01

IC	IC501 (68P61A)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)	0.07	5.01	5.01	5.01	5.01	0	0	0	0	0
800X600-85(53K)	0.07	5.01	5.02	5.01	5.01	0	4.98	0	4.98	0
1024X768-85(68K)	0.07	5.01	5.01	5.01	5.01	0	0	4.98	4.98	4.98
1280X1024-85(91K)	0.07	5.01	5.02	5.01	5.01	0	4.98	4.98	4.98	4.98

IC	IC501 (68P61A)									
PIN / MODE	21	22	23	24	25	26	27	28	29	30
640X480-60(31K)	4.96	0	5.01	0.91~5.02	5.02	0.14	2.44	0.08	0.27	5.02
800X600-85(53K)	4.96	0	5.01	0.94~5.02	5.02	0.13	2.45	0.09	1.25	5.02
1024X768-85(68K)	4.95	0	5.01	0.71~5.02	5.02	0.13	2.45	0.11	2.15	5.02
1280X1024-85(91K)	4.95	0	5.01	0.66~5.02	5.02	0.10	2.44	0.15	4.25	5.02

IC	IC501 (68P61A)									
PIN / MODE	31	32	33	34	35	36	37	38	39	40
640X480-60(31K)	5.02	0.02	0.59	0	0.03	0.06	0.08	0.03	4.05	4.73
800X600-85(53K)	5.02	0.02	0.30	0	0.02	0.04	0.02	0.02	0.30	0.21
1024X768-85(68K)	5.02	0.02	0.34	0	0.02	0.04	0.03	0.03	0.34	0.20
1280X1024-85(91K)	5.02	0.02	0.46	0	0.02	0.04	0.04	0.03	0.45	0.20

8

IC	IC502 (AT24C04)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	5.02	GND	5.02	GND	5.01	5.01	GND	5.02
800X600-85(53K)	5.02	GND	5.02	GND	5.01	5.01	GND	5.02
1024X768-85(68K)	5.02	GND	5.02	GND	5.01	5.01	GND	5.02
1280X1024-85(91K)	5.02	GND	5.02	GND	5.01	5.01	GND	5.02

TR	Q501 (A733)			Q504 (C945)			Q506 (JC337)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	5.02	5.01	4.32	GND	5.00	0.01	8.02	13.37	8.62
800X600-85(53K)	5.02	5.01	4.32	GND	5.00	0.01	8.02	15.38	8.63
1024X768-85(68K)	5.02	5.01	4.32	GND	5.00	0.01	8.02	15.38	8.62
1280X1024-85(91K)	5.02	5.01	4.32	GND	5.00	0.01	8.00	15.35	8.60

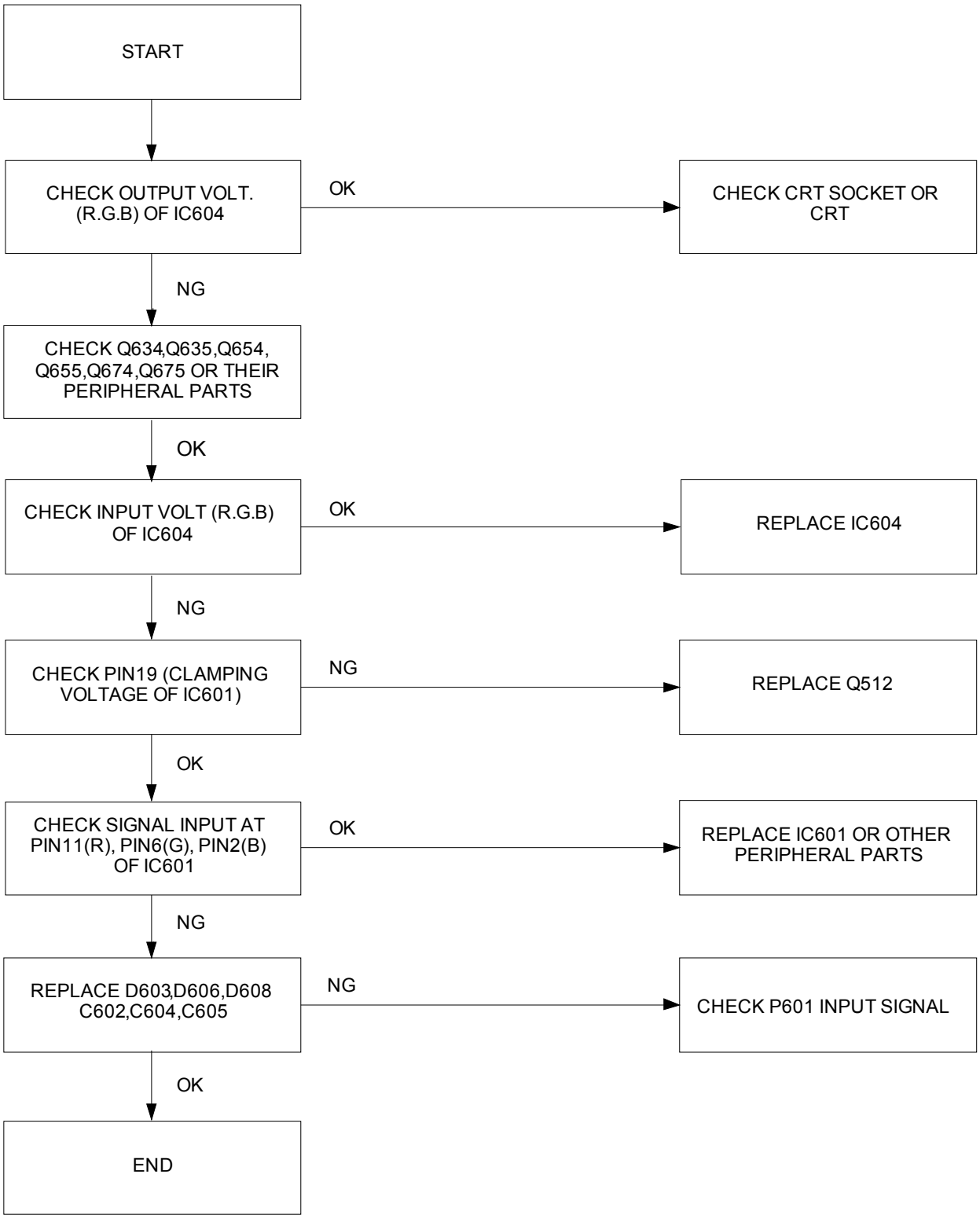
TR	Q510 (JC327)			Q512 (A733)			Q513 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	8.02	GND	8.62	5.02	0.10	5.02	4.73	5.02	0.59
800X600-85(53K)	8.02	GND	8.63	5.02	0.16	5.02	0.21	5.02	0.31
1024X768-85(68K)	8.02	GND	8.62	5.02	0.21	5.02	0.21	5.02	0.35
1280X1024-85(91K)	8.00	GND	8.60	5.02	0.27	5.02	0.20	5.02	0.46

TR	Q514 (C945)			Q515 (JC337)			Q516 (JC327)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	2.81	0.25	6.32	15.35	6.76	6.32	GND	6.76
800X600-85(53K)	GND	8.74	0.25	6.33	15.36	6.77	6.33	GND	6.77
1024X768-85(68K)	GND	8.73	0.25	6.32	15.36	6.77	6.32	GND	6.77
1280X1024-85(91K)	GND	8.72	0.25	6.28	15.34	6.76	6.28	GND	6.76

4

TR	Q517 (C945)			Q518 (JC337)			Q519 (JC327)			Q520 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	6.60	0.38	6.34	15.36	5.86	6.34	GND	5.86	GND	5.56	0.37
800X600-85(53K)	GND	6.60	0.37	6.33	15.38	5.86	6.33	GND	5.86	GND	5.56	0.37
1024X768-85(68K)	GND	6.60	0.37	6.32	15.37	5.86	6.32	GND	5.86	GND	5.56	0.37
1280X1024-85(91K)	GND	6.58	0.37	6.29	15.35	5.84	6.29	GND	5.84	GND	5.54	0.37

7.4 VIDEO CIRCUIT TROUBLESHOOTING ROUTINE



TEST CONDITIONS: AC LINE IN:110V/60Hz
TIMING: 640X480-60Hz (31K)
PATTERN: a. Cross-hatch b. Full white

4

Unit: Volt

IC	IC601 (M52743)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
Cross-hatch	0.65	2.45	11.78	0.14	GND	2.44	0.01	11.77	0.14	GND
Full white	0.64	2.85	11.76	0.14	GND	2.85	3.03	11.75	0.14	GND

IC	IC601 (M52743)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
Cross-hatch	2.43	11.76	0.14	GND	3.06	0.01	5.00	0.02	0.10	5.01
Full white	2.87	11.75	0.14	GND	2.74	0.01	5.00	0.02	0.21	5.01

IC	IC601(M52743)									
PIN / MODE	21	22	23	24	25	26	27	28	29	30
Cross-hatch	5.01	GND	3.89	1.79	2.05	2.21	0.37	4.95	1.94	1.92
Full white	5.01	GND	3.84	1.79	2.05	2.21	0.79	4.95	3.45	1.92

IC	IC601 (M52743)					
PIN / MODE	31	32	33	34	35	36
Cross-hatch	4.45	1.93	GND	3.72	1.94	11.67
Full white	4.45	3.43	GND	4.22	3.43	11.64

8

IC	IC603 (M35045)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
Cross-hatch	5.00	GND	4.99	5.01	5.01	5.01	GND	5.00	5.00	5.00
Full white	5.00	GND	5.00	5.00	5.01	5.01	GND	5.00	5.00	5.00

IC	IC603 (M35045)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
Cross-hatch	GND	0.04	0.05	5.00	0.05	5.00	0.05	0.37	5.00	5.00
Full white	GND	0.04	0.05	5.00	0.05	5.00	0.05	0.79	5.00	5.00

IC	IC604 (LM2435T)								
PIN / MODE	1	2	3	4	5	6	7	8	9
Cross-hatch	65.48	65.22	65.12	79.51	GND	1.30	1.30	11.75	1.29
Full white	45.06	44.88	44.46	79.66	GND	2.75	2.74	11.75	2.73

60

TR	Q607 (A733)			Q608 (C945)		
PIN / MODE	E	C	B	E	C	B
Cross-hatch	3.11	GND	5.14	0.37	5.02	0.09
Full white	2.81	GND	2.23	0.79	5.02	0.52

TR	Q634 (BF423)			Q635 (BF422)			Q654 (BF423)		
PIN / MODE	E	C	B	E	C	B	E	C	B
Cross-hatch	70.65	GND	70.32	1.19	58.20	1.79	67.60	GND	68.11
Full white	70.49	GND	70.49	1.19	58.43	1.79	68.34	GND	68.35

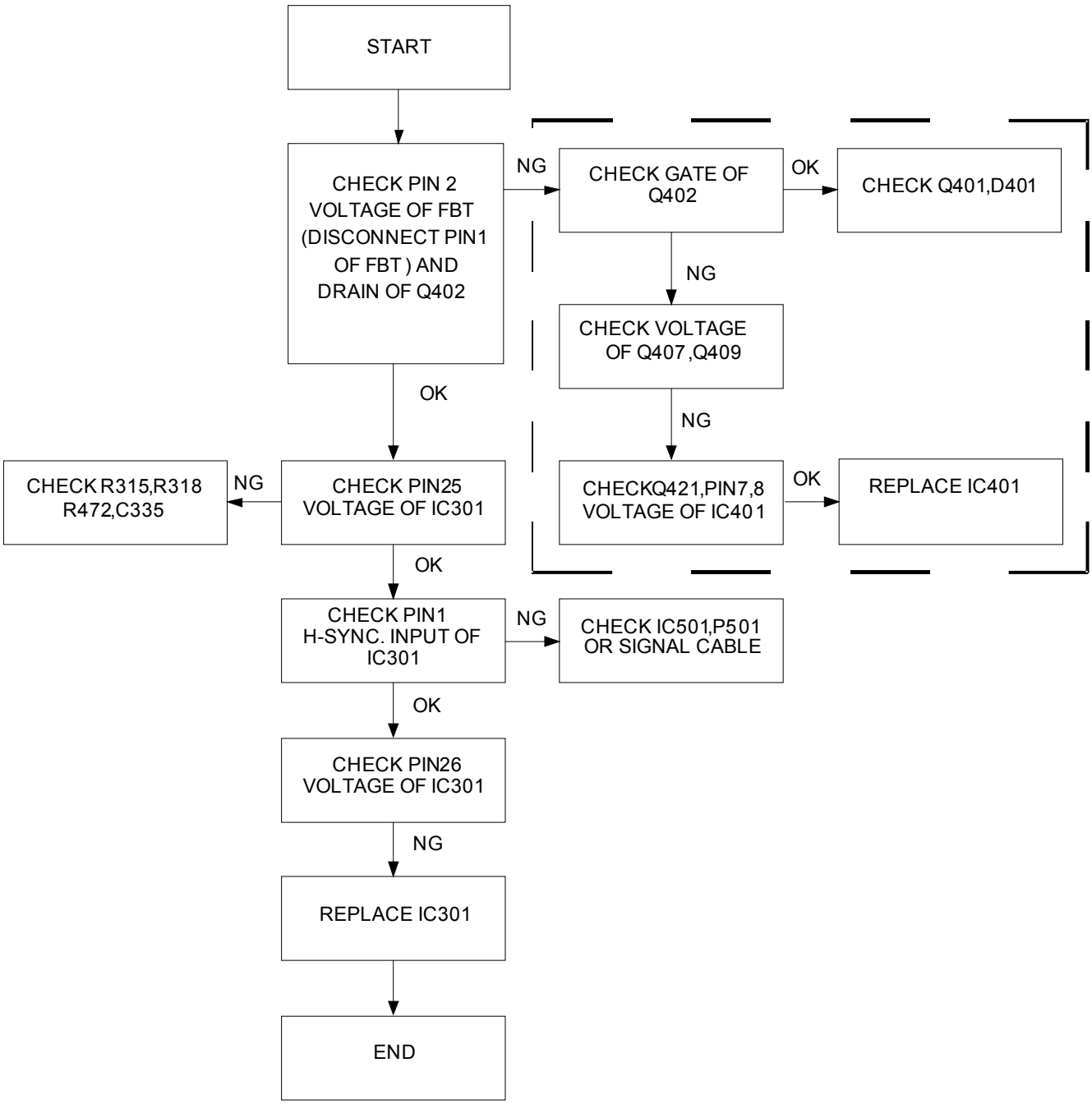
TR	Q655 (BF422)			Q674 (BF423)			Q675 (BF422)		
PIN / MODE	E	C	B	E	C	B	E	C	B
Cross-hatch	1.45	53.20	2.05	66.36	GND	66.91	1.61	50.47	2.21
Full white	1.45	53.46	2.05	67.16	GND	67.15	1.61	50.47	2.21

4

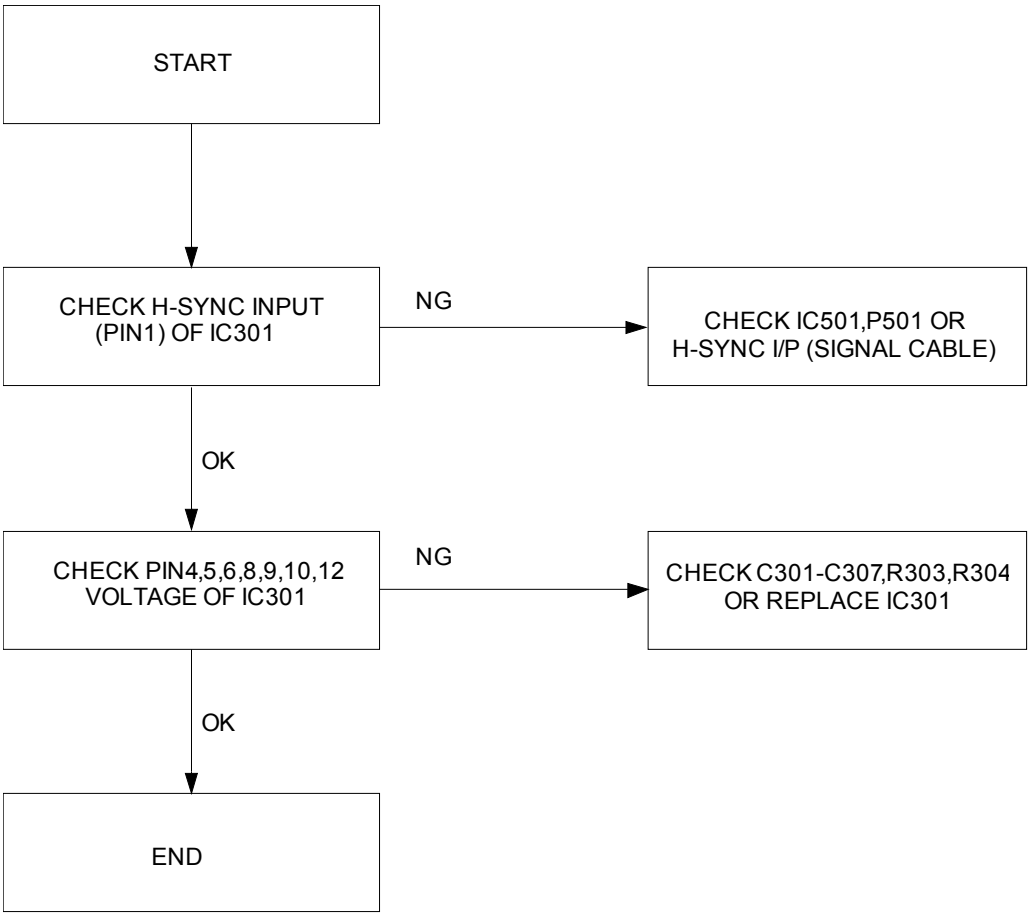
7.5 DEFLECTION CIRCUIT TROUBLESHOOTING ROUTINE

7.5.1 Horizontal Deflection Circuit

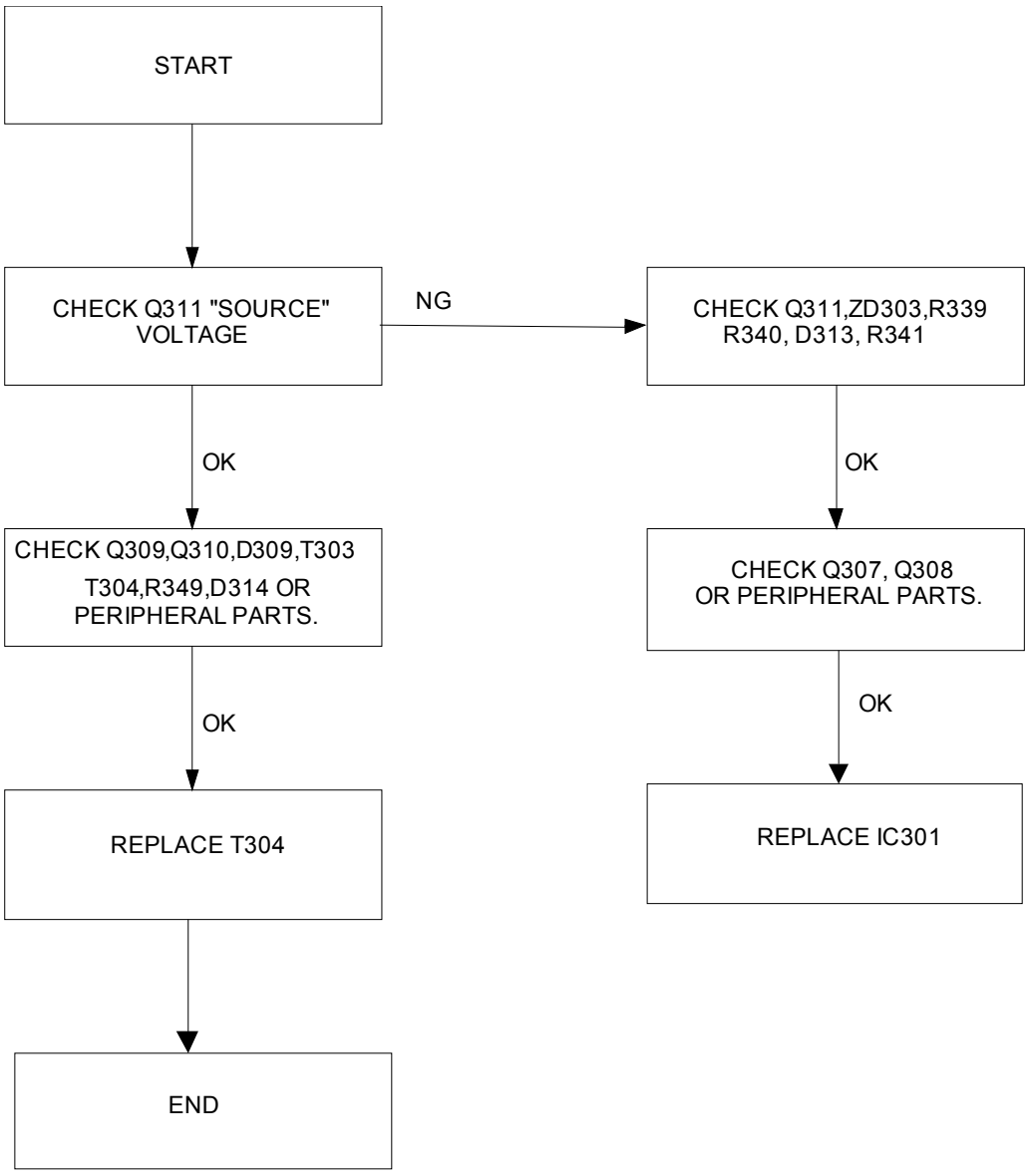
4 No Raster



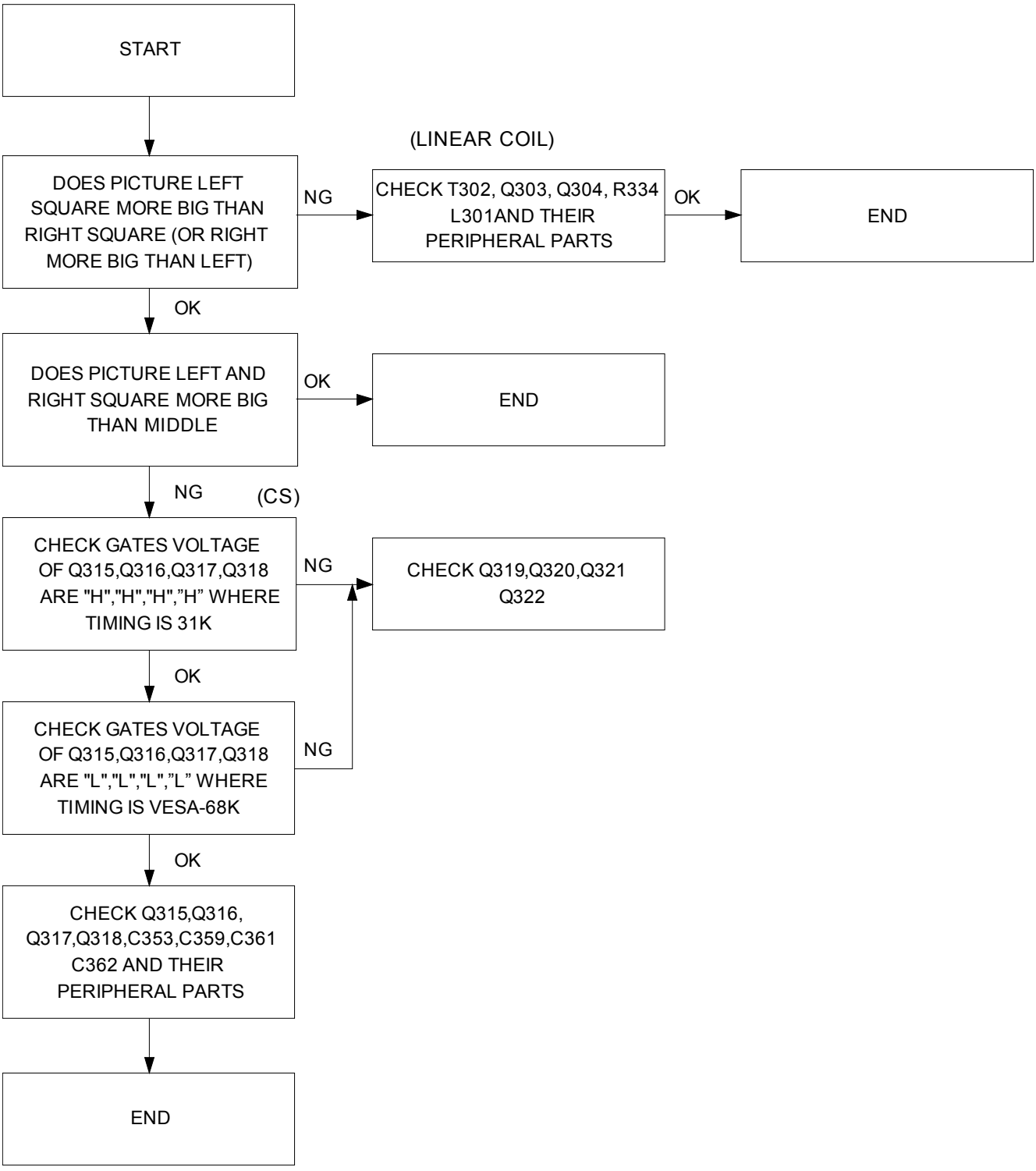
H-Asynchronous



No Horizontal Scan



Linearity

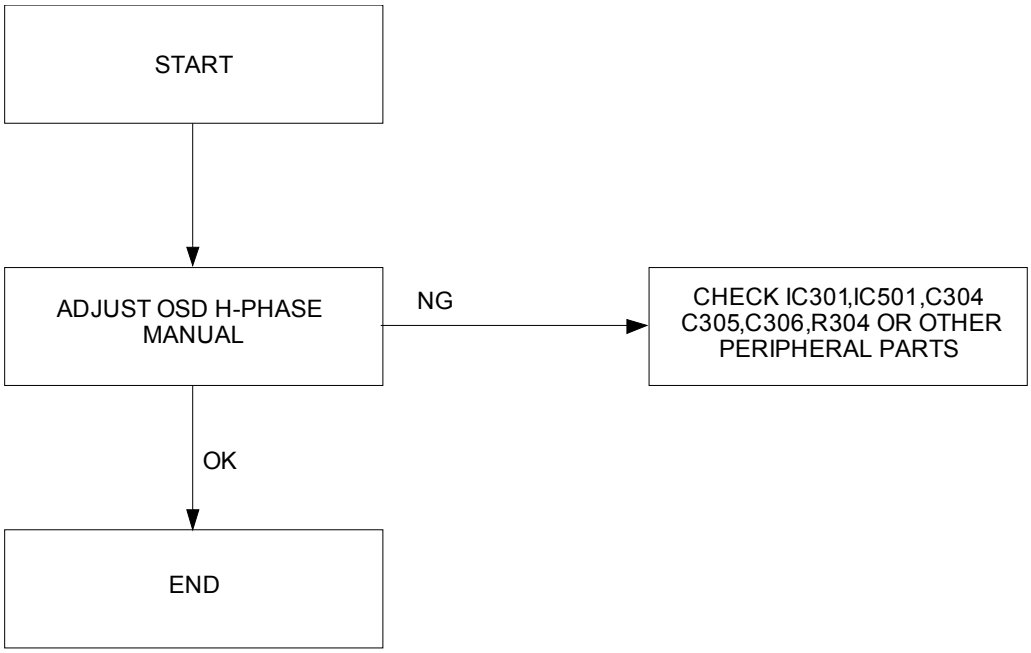


4

REMARK: 1. “L” means the voltage between gate and source is ∠4V which can’t turn on the MOSFET.

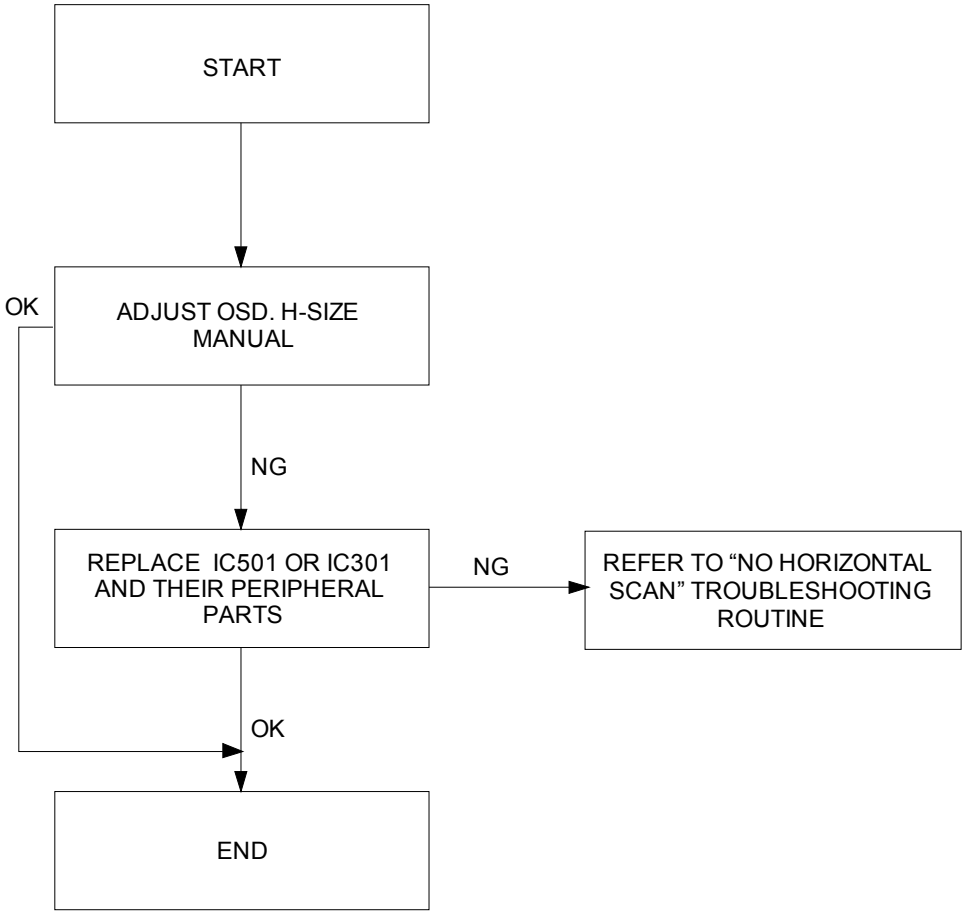
2. “H” means the voltage between gate and source is ≥4V which can turn on the MOSFET.

Out of phase



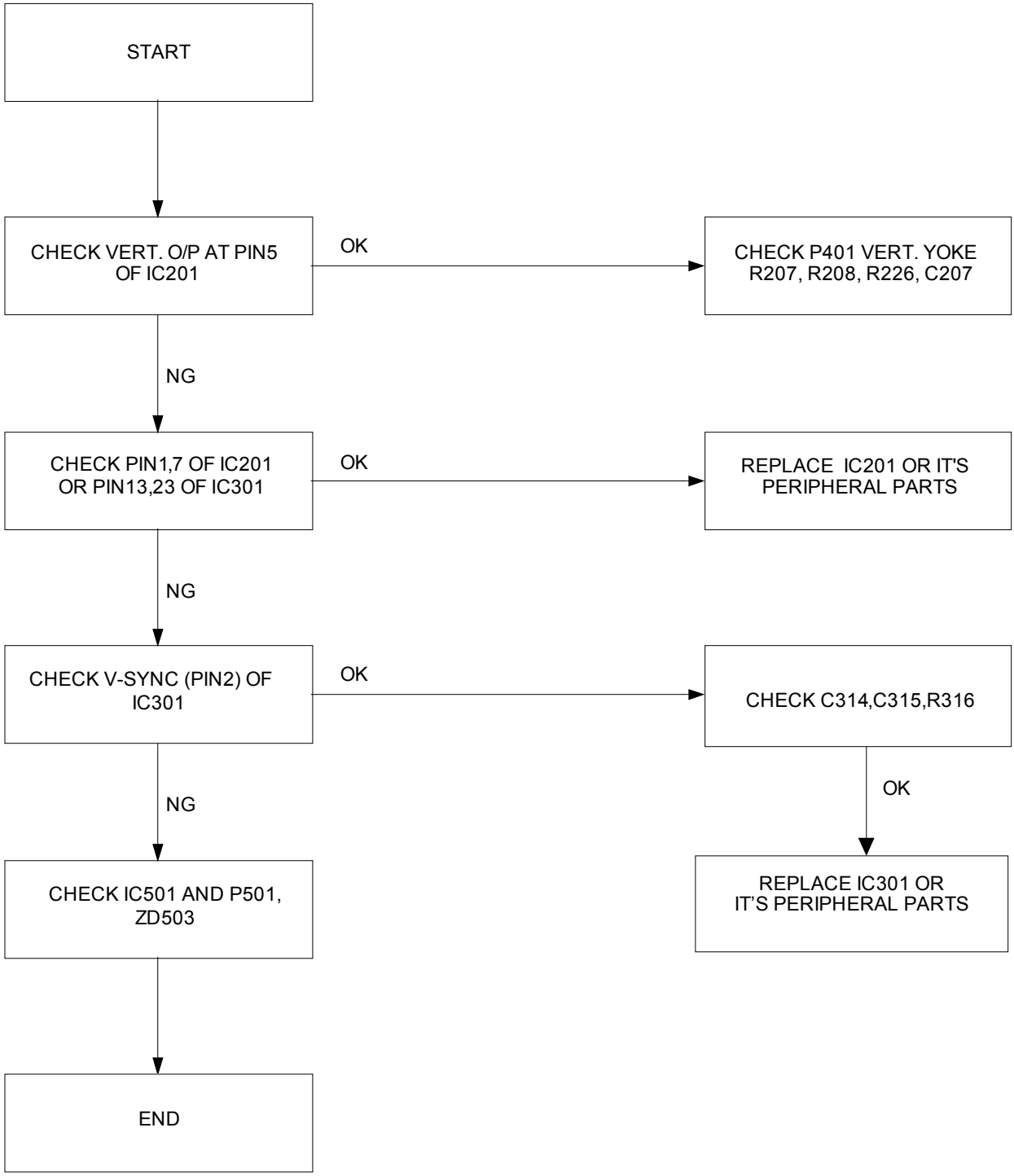
4

Width Abnormal



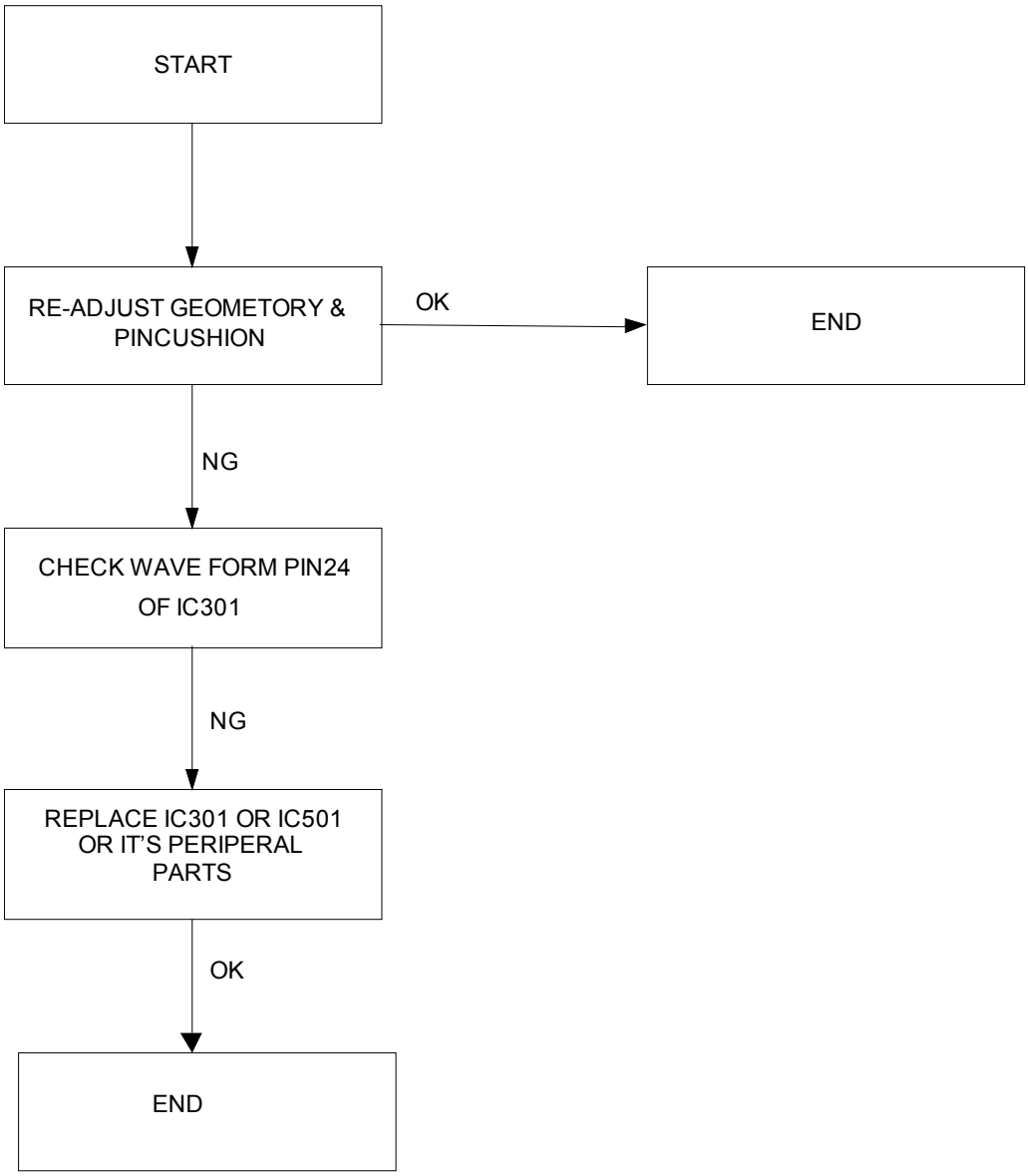
7.5.2 Vertical Deflection Circuit

No vertical scan

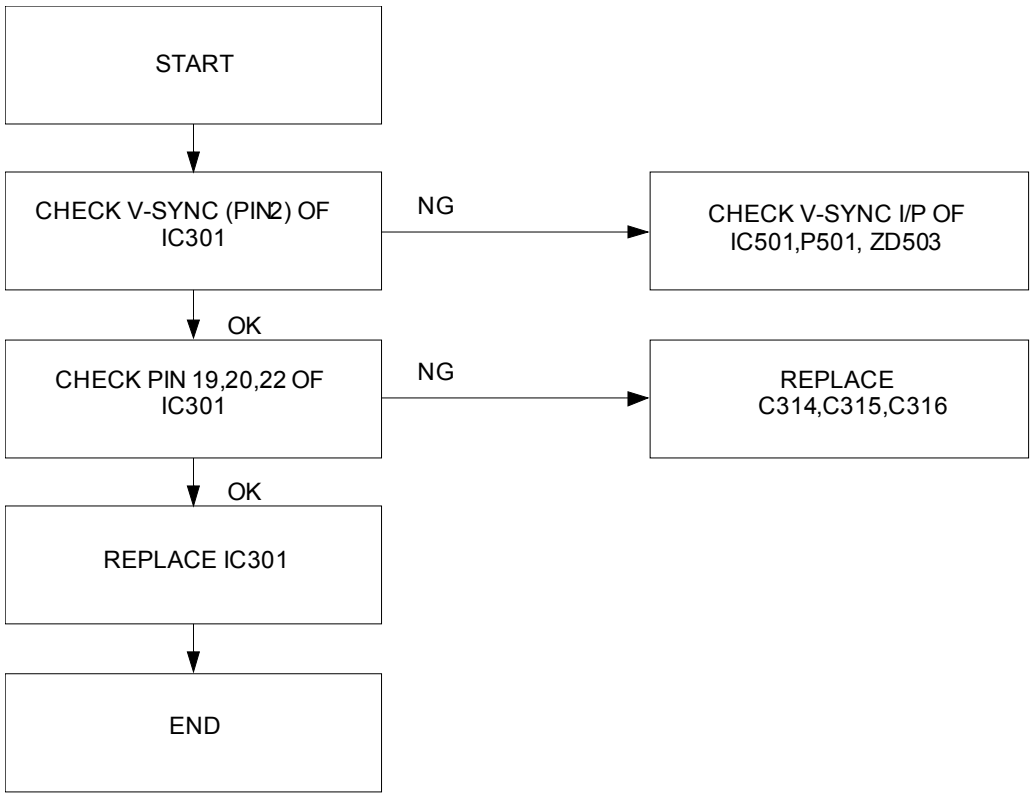


4

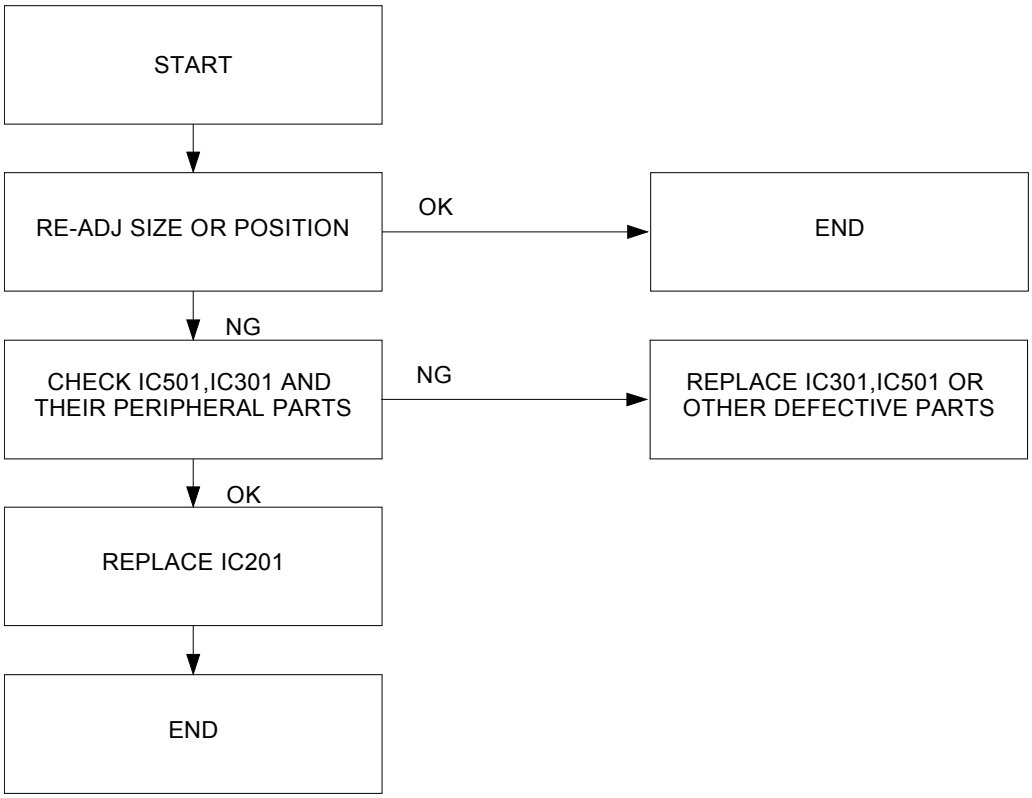
Picture distortion



V-Asynchronous



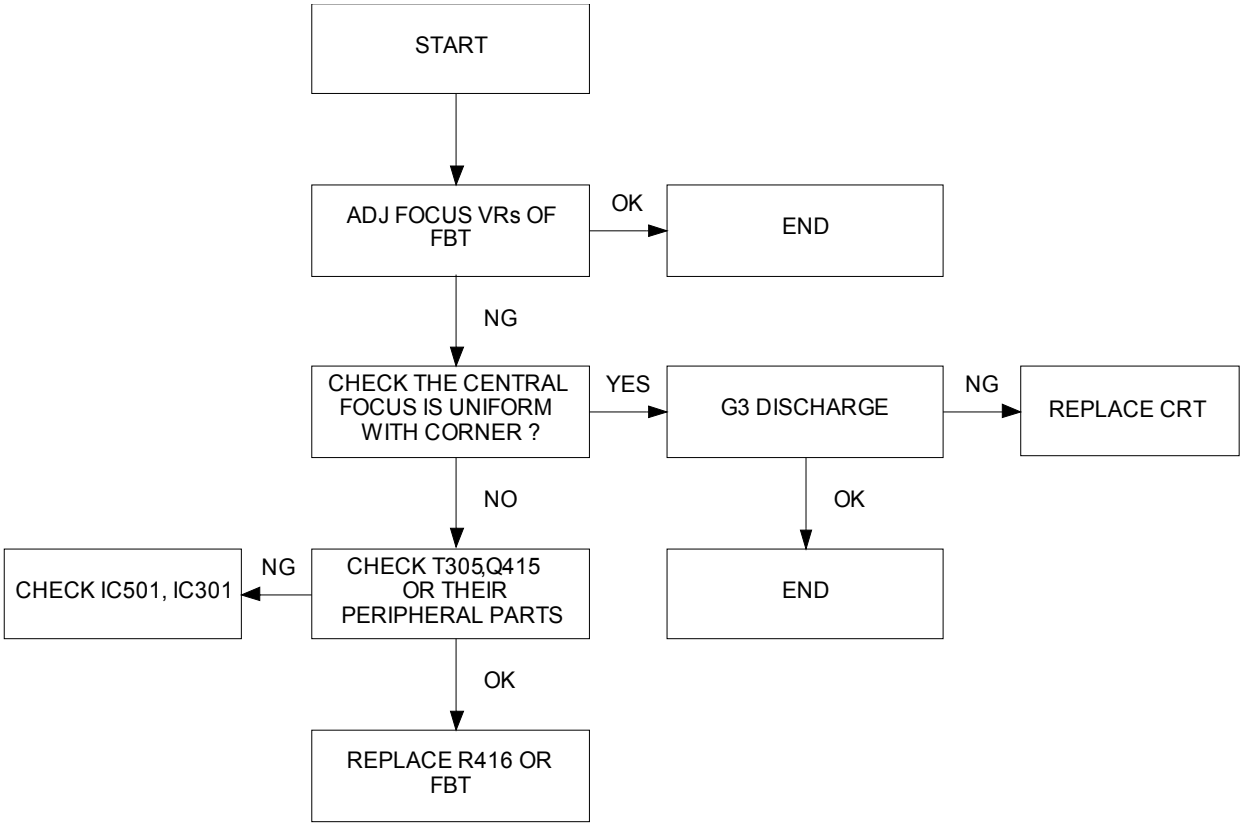
Vertical position & Size



4

7.5.3 Other

Poor focus



4

TEST CONDITIONS: AC LINE IN:110V/60Hz
PATTERN: CROSS HATCH
4 STATUS : NORMAL

Unit: Volt

IC	IC201 (TDA8172)						
PIN / MODE	1	2	3	4	5	6	7
640X480-60(31K)	1.10	14.64	-14.66	-15.18	0.42	14.25	1.10
800X600-85(53K)	1.10	14.68	-14.53	-15.22	0.38	14.40	1.10
1024X768-85(68K)	1.10	14.68	-14.54	-15.23	0.38	14.39	1.10
1280X1024-85(91K)	1.10	14.65	-14.57	-15.25	0.34	14.37	1.10

IC	IC301 (TDA9112)									
PIN / MODE	1	2	3	4	5	6	7	8	9	10
640X480-60(31K)	0.59	0.02	0.10	6.28	3.37	3.92	GND	1.59	1.60	3.62
800X600-85(53K)	0.30	0.03	0.11	6.28	3.01	3.90	GND	2.77	2.78	3.58
1024X768-85(68K)	0.35	0.02	0.11	6.28	2.72	3.89	GND	3.57	3.58	3.55
1280X1024-85(91K)	0.46	0.02	0.12	6.28	2.11	3.87	GND	4.79	4.80	3.55

IC	IC301 (TDA9112)									
PIN / MODE	11	12	13	14	15	16	17	18	19	20
640X480-60(31K)	2.73	0	7.91	2.81	3.83	0.09	3.71	3.81	1.90	5.29
800X600-85(53K)	2.70	0.15	7.91	2.77	3.84	0.15	5.12	5.18	1.90	5.07
1024X768-85(68K)	2.69	0.26	7.91	2.71	3.84	0.18	5.13	5.21	1.90	5.07
1280X1024-85(91K)	2.69	0.44	7.91	2.74	3.84	0.24	4.94	5.01	1.90	5.06

8

IC	IC301 (TDA9112)											
PIN / MODE	21	22	23	24	25	26	27	28	29	30	31	32
640X480-60(31K)	GND	3.42	3.32	3.51	7.29	3.90	GND	8.47	11.97	5.02	5.02	3.61
800X600-85(53K)	GND	3.39	3.33	3.69	7.30	3.83	GND	6.79	11.97	5.02	5.02	3.63
1024X768-85(68K)	GND	3.39	3.33	3.87	7.17	3.77	GND	3.72	11.97	5.02	5.02	3.64
1280X1024-85(91K)	GND	3.40	3.33	3.78	7.09	4.56	GND	3.95	11.96	5.02	5.02	3.64

IC	IC401 (3843)							
PIN / MODE	1	2	3	4	5	6	7	8
640X480-60(31K)	3.63	2.50	0.05	-0.12	GND	1.99	11.22	5.00
800X600-85(53K)	3.15	2.50	0.05	-0.03	GND	2.97	11.21	5.00
1024X768-85(68K)	3.00	2.50	0.05	0.04	GND	3.68	11.21	5.00
1280X1024-85(91K)	2.90	2.50	0.05	0.12	GND	4.72	11.21	5.00

TR	Q303 (JC337)			Q304 (A733)		
PIN / MODE	E	C	B	E	C	B
640X480-60(31K)	1.83	6.34	2.43	2.43	GND	1.78
800X600-85(53K)	2.48	6.33	3.09	3.09	GND	2.46
1024X768-85(68K)	3.07	6.32	3.69	3.69	GND	3.07
1280X1024-85(91K)	4.45	6.29	5.11	5.11	GND	4.50

TR	Q305 (C945)			Q307 (C945)			Q308 (A733)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	0.09	0.27	8.08	11.98	8.47	8.08	GND	8.47
800X600-85(53K)	GND	0.15	0.05	6.59	11.97	6.79	6.59	GND	6.79
1024X768-85(68K)	GND	0.18	0.26	5.64	11.97	5.72	5.64	GND	5.72
1280X1024-85(91K)	GND	0.24	0.58	4.07	11.97	3.95	4.07	GND	3.95

TR	Q309 (C5411)			Q310 (2SK941)			Q311 (2SJ449)		
PIN / MODE	E	C	B	S	D	G	S	D	G
640X480-60(31K)	GND	46.37	-0.32	GND	14.72	3.10	207.44	47.62	206.04
800X600-85(53K)	GND	72.28	-0.31	GND	14.48	3.02	207.27	81.02	204.52
1024X768-85(68K)	GND	100.69	-0.32	GND	14.34	2.97	207.24	102.61	203.61
1280X1024-85(91K)	GND	136.11	-0.39	GND	13.34	3.70	207.14	138.14	202.08

4

TR	Q315 (IRF630)			Q316 (IRF630)			Q317 (FS12KM-4A)		
PIN / MODE	S	D	G	S	D	G	S	D	G
640X480-60(31K)	GND	0	11.97	GND	0	11.97	GND	0	11.97
800X600-85(53K)	GND	33.80	0.03	GND	0.08	11.97	GND	34.17	0.03
1024X768-85(68K)	GND	0.01	11.97	GND	47.96	0.03	GND	47.98	0.03
1280X1024-85(91K)	GND	54.10	0.03	GND	54.24	0.03	GND	54.26	0.03

TR	Q318 (IRF630)			Q319 (C3400)			Q320 (C3400)		
PIN / MODE	S	D	G	E	C	B	E	C	B
640X480-60(31K)	GND	0	11.97	GND	11.97	0	GND	11.97	0
800X600-85(53K)	GND	0	11.97	GND	11.97	0	GND	0.03	4.99
1024X768-85(68K)	GND	47.48	0.03	GND	0.03	4.99	GND	0.03	4.98
1280X1024-85(91K)	GND	53.78	0.03	GND	0.03	4.98	GND	0.03	4.98

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TR	Q321 (C3400)			Q322 (C3400)			Q401 (FS3KM-18A)		
PIN / MODE	E	C	B	E	C	B	S	D	G
640X480-60(31K)	GND	11.97	0	GND	11.97	0	0.05	207.84	1.29
800X600-85(53K)	GND	11.97	0	GND	0.03	4.99	0.05	207.78	1.95
1024X768-85(68K)	GND	0.03	4.99	GND	11.96	0	0.05	207.74	2.46
1280X1024-85(91K)	GND	0.03	4.98	GND	0.03	4.98	0.05	207.69	3.19

TR	Q402 (IRF9634)			Q407 (C945)			Q409 (A733)		
PIN / MODE	S	D	G	E	C	B	E	C	B
640X480-60(31K)	207.70	159.13	203.38	1.29	1.99	1.61	11.91	3.66	11.95
800X600-85(53K)	207.71	134.42	204.49	1.95	2.96	2.31	11.86	4.97	11.92
1024X768-85(68K)	207.71	115.18	205.24	2.46	3.68	2.84	11.82	5.85	11.90
1280X1024-85(91K)	207.71	85.84	206.08	3.20	4.73	3.61	11.77	6.89	11.88

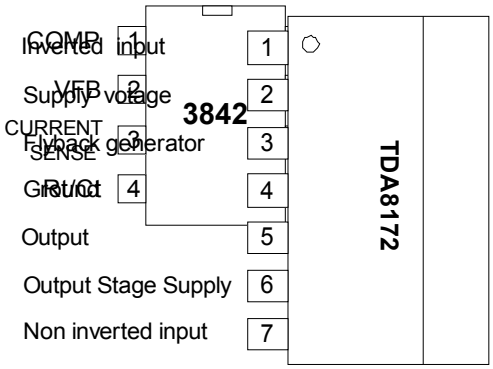
TR	Q411 (C945)			Q412 (BF423)			Q414 (C945)		
PIN / MODE	E	C	B	E	C	B	E	C	B
640X480-60(31K)	GND	9.53	0.06	1.82	-16.34	1.22	-0.10	2.37	0.03
800X600-85(53K)	GND	9.49	0.06	1.78	-16.79	1.18	0.18	2.34	0.03
1024X768-85(68K)	GND	9.53	0.06	1.98	-17.15	1.39	0.15	2.53	0.03
1280X1024-85(91K)	GND	9.57	0.07	2.13	-17.40	1.53	0.13	2.67	0.03

4

TR	Q415 (MPSA44)			Q421 (C945)		
PIN / MODE	E	C	B	E	C	B
640X480-60(31K)	0.33	118.37	0.81	2.49	5.00	3.12
800X600-85(53K)	0.32	119.67	0.82	2.49	5.00	3.13
1024X768-85(68K)	0.32	119.82	0.82	2.49	5.00	3.13
1280X1024-85(91K)	0.32	119.87	0.82	2.49	5.00	3.13

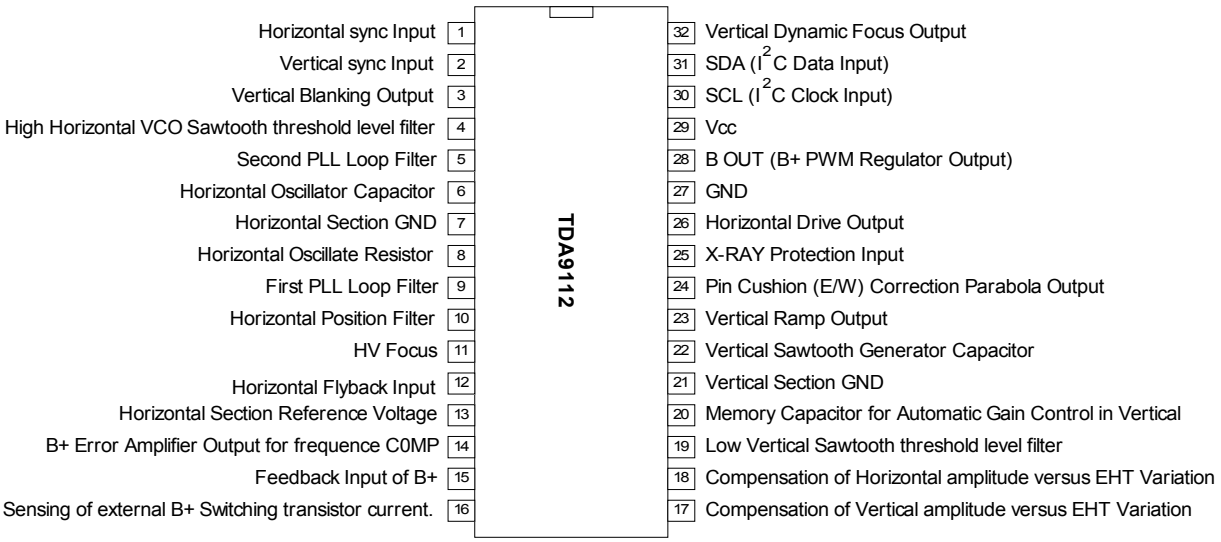
8.0 IC CONFIGURATION

(1) 3842 (IC101)

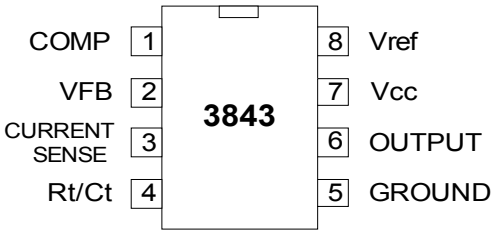


4 **(2) TDA8172 (IC201)**

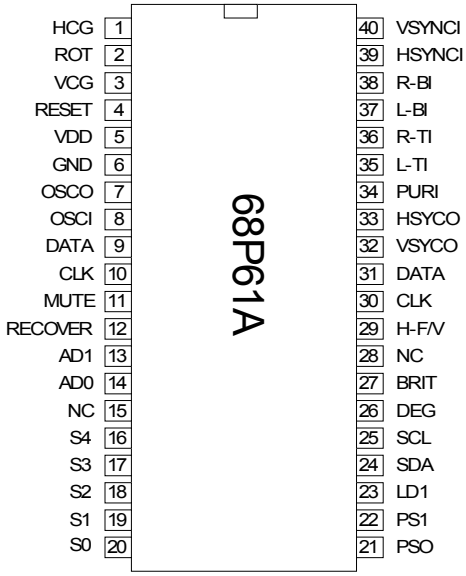
(3) TDA9112 (IC301)



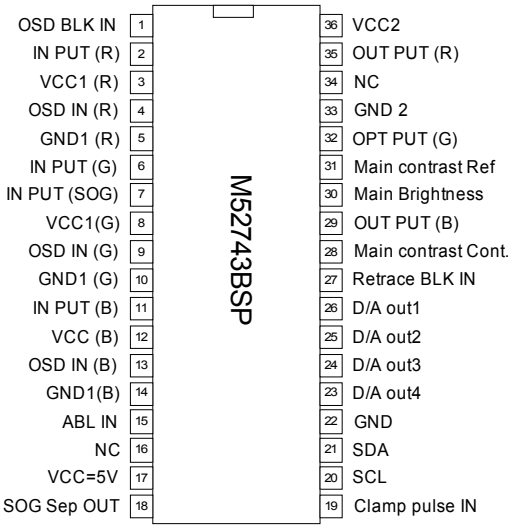
8**(4) 3843 (IC401)**



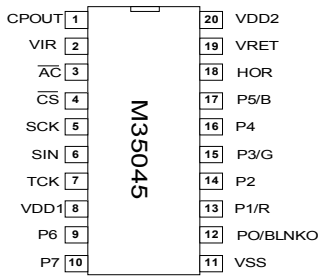
(5) 68P61A (IC501)



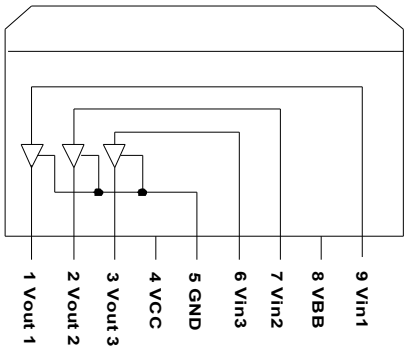
(6) M52743BSP (IC601)



(7) M35045 (IC603)



(8) LM2435T (IC604)



9.0 PARTS LIST

CFA1797B Parts List

Abbreviations : Capacitors EL: Electrolytic Aluminum, TA: Tantalum, CE: Ceramic
PP: Polypropylene, PEI: Polyster (Inductive),
PEN: Polyster (Non-Inductive) PPS: Serial Poly Propylene,
MPE: Polyster Metalized, MPP: Polypropylene Metalized.
Resistors CF: Carbon Film, MF:Metal Film, VR: Variable Resistor.
MOF: Metal Oxide Film, POT: Potentiometer
Semiconductor TR: Transistor, DI: Diode, ZD: Zener Diode, IC: IC.

Remark: ●: 1st priority , Recommended Q'ty = (Location Number x3)
⊙: 2nd priority, Recommended Q'ty = (Location Number x2)
N : New parts
! : Critical Components Affecting X-radiation

	LOCATION	PART NO.	DESCRIPTION
		TRANSISTOR	
	Q102	14C92-111B	TR NPN 2SC945P/Q
●	Q104	14K22-280U	TR MOS FET FS7KM-16A
⊙	Q107	14C92-101B	TR NPN 2SC2001K
	Q109	14C92-111B	TR NPN 2SC945P/Q
	Q110	14B92-011P	TR PNP 2SB562
	Q111	14C92-111B	TR NPN 2SC945P/Q
	Q113	14C92-111B	TR NPN 2SC945P/Q
	Q114	14C92-111B	TR NPN 2SC945P/Q
	Q116	14A92-021B	TR PNP 2SA733P/Q
	Q117	14C92-111B	TR NPN 2SC945P/Q
	Q303	14C92-311E	TR NPN JC337-25
	Q304	14A92-021B	TR PNP 2SA733P/Q
	Q305	14C92-111E	TR NPN 2SC945P/Q
	Q307	14C92-111B	TR NPN 2SC945P/Q
	Q307	14C92-111E	TR NPN 2SC945P/Q
	Q308	14A92-021B	TR PNP 2SA733P/Q
●	Q309	14C3P-250A	TR NPN 2SC5411
	Q310	14K93-021P	TR MOS FET 2SK941
●	Q311	14J22-020B	TR MOS FET 2SJ449
	Q315	14K22-380Y	TR MOS FET IRFS630A
	Q317	14K22-390Y	TR MOS FET IRFS640A
	Q318	14K22-380Y	TR MOS FET IRFS630A
	Q319	14C92-331C	TR NPN 2SC3400
	Q320	14C92-331C	TR NPN 2SC3400
	Q321	14C92-331C	TR NPN 2SC3400
	Q322	14C92-331C	TR NPN 2SC3400
●	Q401	14J22-040Y	TR MOS FET SFS9634
⊙	Q402	14K22-260U	TR MOS FET FS3KM-18A
	Q407	14C92-111B	TR NPN 2SC945P/Q
	Q409	14A92-021B	TR PNP 2SA733P/Q
	Q411	14C92-111B	TR NPN 2SC945P/Q
	Q412	14A92-061F	TR PNP BF423
	Q414	14C92-111B	TR NPN 2SC945P/Q
	Q415	14C92-371N	TR NPN MPSA44
	Q421	14C92-111E	TR NPN 2SC945P/Q
	Q501	14A92-021B	TR PNP 2SA733P/Q
	Q504	14C92-111B	TR NPN 2SC945P/Q
	Q506	14C92-311E	TR NPN JC337-25
	Q510	14A92-151E	TR PNP JC327-25
	Q512	14A92-021B	TR PNP 2SA733P/Q
	Q513	14C92-111B	TR NPN 2SC945P/Q
	Q514	14C92-111B	TR NPN 2SC945P/Q
	Q515	14C92-311E	TR NPN JC337-25
	Q516	14A92-151E	TR PNP JC327-25
	Q517	14C92-111B	TR NPN 2SC945P/Q
	Q607	14A92-021B	TR PNP 2SA733P/Q
	Q608	14C92-111E	TR NPN 2SC945P/Q
⊙	Q634	14A92-061E	TR PNP BF423
⊙	Q635	14C92-011E	TR NPN BF422
⊙	Q654	14A92-061E	TR PNP BF423
⊙	Q655	14C92-011E	TR NPN BF422
⊙	Q674	14A92-061E	TR PNP BF423
⊙	Q675	14C92-011E	TR NPN BF422
		DIODES	
	D101	15S49T200F	DI HI SW 1A 1000V BYV26E
	D102	15S47TK00F	DI HI SW 2.3A 600V BYM26C
	D103	15S11M001F	DI SW 0.5A 50V 1N4148
	D106	15S43T401T	DI HI SW 2A 200V HER203
	D107	15S45T201T	DI HI SW 1A 400V HER105
	D108	15S49TK00F	DI HI SW 2.3A 1000V BYM26E
	D109	15S47T401T	DI HI SW 2A 600V HER206
	D110	15S47T601F	DI HI SW 3A 600V BYM36C
	D112	15S43T401T	DI HI SW 2A 200V HER203
	D113	15S33T201F	DI MD SW 1A 200V BYD33D
	D114	15B40T2012	DI HI SW 1A50V 1N5819
	D117	15S49TK00F	DI HI SW 2.3A 1000V BYM26E
	D119	15S11M001F	DI SW 0.5A 50V 1N4148
	D120	15S11M001F	DI SW 0.5A 50V 1N4148
	D121	15S11M001F	DI SW 0.5A 50V 1N4148
	D122	15S11M001F	DI SW 0.5A 50V 1N4148
	D204	15S62M201F	DI REC 1A 100V 1N4002

LOCATION	PART NO.	DESCRIPTION
D301	15S11M001F	DI SW 0.5A 50V 1N4148
⊙ D309	15S3C-901F	DI MD SW 8A 1500V DD84RC
D310	15S35T201F	DI MD SW 1A 400V BYD33G
D312	15B40T2012	DI HI SW 1A50V 1N5819
D313	15S47T201F	DI HI SW 1A 600V BYV26C
D314	15S11M001F	DI SW 0.5A 50V 1N4148
D316	15S33T201F	DI MD SW 1A 200V BYD33D
D317	15S33T201F	DI MD SW 1A 200V BYD33D
◓ D401	15S49B602F	DI HI SW 3A 1000V HER308
D402	15S11M001F	DI SW 0.5A 50V 1N4148
D403	15S11M001F	DI SW 0.5A 50V 1N4148
D404	15S62M201F	DI REC 1A 100V 1N4002
D405	15S11M001F	DI SW 0.5A 50V 1N4148
D407	15S35T201F	DI MD SW 1A 400V BYD33G
D408	15S11M001F	DI SW 0.5A 50V 1N4148
D411	15S11M001F	DI SW 0.5A 50V 1N4148
D412	15S11M001F	DI SW 0.5A 50V 1N4148
D413	15S11M001F	DI SW 0.5A 50V 1N4148
D415	15S11M001F	DI SW 0.5A 50V 1N4148
D416	15S11M001F	DI SW 0.5A 50V 1N4148
D417	15S62M201F	DI REC 1A 100V 1N4002
D418	15S62M201F	DI REC 1A 100V 1N4002
D419	15S11M001F	DI SW 0.5A 50V 1N4148
D420	15S33T201F	DI MD SW 1A 200V BYD33D
D506	15S62M201F	DI REC 1A 100V 1N4002
D601	15S11M001F	DI SW 0.5A 50V 1N4148
D602	15S11M001F	DI SW 0.5A 50V 1N4148
D603	15S11M001F	DI SW 0.5A 50V 1N4148
D604	15S11M001F	DI SW 0.5A 50V 1N4148
D605	15S11M001F	DI SW 0.5A 50V 1N4148
D606	15S11M001F	DI SW 0.5A 50V 1N4148
D607	15S11M001F	DI SW 0.5A 50V 1N4148
D608	15S11M001F	DI SW 0.5A 50V 1N4148
D609	15S11M001F	DI SW 0.5A 50V 1N4148
D610	15S11M001F	DI SW 0.5A 50V 1N4148
D611	15S11M001F	DI SW 0.5A 50V 1N4148
D631	15S43M001F	DI HI SW 0.5A 200V BAV21
D632	15S43M001F	DI HI SW 0.5A 200V BAV21
D633	15S11M001F	DI SW 0.5A 50V 1N4148
D651	15S43M001F	DI HI SW 0.5A 200V BAV21
D652	15S43M001F	DI HI SW 0.5A 200V BAV21
D653	15S11M001F	DI SW 0.5A 50V 1N4148
D671	15S43M001F	DI HI SW 0.5A 200V BAV21
D672	15S43M001F	DI HI SW 0.5A 200V BAV21
D673	15S11M001F	DI SW 0.5A 50V 1N4148

ZENER DIODES

ZD101	15Z33M1800H	DI ZENER 18V 5% 0.5W
ZD102	15Z33M6290H	DI ZENER 6.2V 5% 0.5W
ZD103	15Z33M1000H	DI ZENER 10V 5% 0.5W
ZD303	15Z33M1200H	DI ZENER 12V 5% 0.5W
ZD401	15Z33M5690H	DI ZENER 5.6V 5% 0.5W
ZD404	15Z33M1200H	DI ZENER 12V 5% 0.5W
ZD410	15Z33M1800H	DI ZENER 18V 5% 0.5W
ZD501	15Z33M3990H	DI ZENER 3.9V 5% 0.5W

LOCATION	PART NO.	DESCRIPTION
ZD502	15Z33M5190H	DI ZENER 5.1V 5% 0.5W
ZD503	15Z33M5190H	DI ZENER 5.1V 5% 0.5W

RESISTORS

R101	22245-1051	RES CF 1M 5% 1/2W
R102	23755-4334	RES MOF 43K 5% 2W
R103	23765-303B	RES MOF 30K 5% 3W
R105	23755-1004	RES MOF 10R 5% 2W
R105	23755-8294	RES MOF 8R2 5% 2W
R106	22225-102M	RES CF 1K 5% 1/4W
R109	22215-473M	RES CF 47K 5% 1/8W
R110	22215-471M	RES CF 470R 5% 1/8W
R111	22225-103M	RES CF 10K 5% 1/4W
R112	23755-4334	RES MOF 43K 5% 2W
R113	23A11-102M	RES MF 1K 1% 1/8W
R114	22215-133M	RES CF 13K 5% 1/8W
R115	22215-103M	RES CF 10K 5% 1/8W
R117	22225-472M	RES CF 4K7 5% 1/4W
R118	22215-222M	RES CF 2K2 5% 1/8W
R120	22245-6831	RES CF 68K 5% 1/2W
R121	22225-221M	RES CF 220R 5% 1/4W
R123	22215-820M	RES CF 82R 5% 1/8W
R124	23245-3934	RES MOF 39K 5% 1W
R125	22215-471M	RES CF 470R 5% 1/8W
◓ R126	23755-2284	RES MOF 0.22R 5% 2W
R128	22215-100M	RES CF 10R 5% 1/8W
R129	22225-681M	RES CF 680R 5% 1/4W
R131	22215-242M	RES CF 2K4 5% 1/8W
R132	22215-272M	RES CF 2K7 5% 1/8W
R133	22215-102M	RES CF 1K 5% 1/8W
R134	22225-221M	RES CF 220R 5% 1/4W
R135	22215-103M	RES CF 10K 5% 1/8W
R136	22225-103M	RES CF 10K 5% 1/4W
R139	23A11-182M	RES MF 1K8 1% 1/8W
R140	22215-153M	RES CF 15K 5% 1/8W
R141	22215-472M	RES CF 4K7 5% 1/8W
R142	22225-103M	RES CF 10K 5% 1/4W
R143	22245-1051	RES CF 1M 5% 1/2W
R144	22245-2231	RES CF 22K 5% 1/2W
R145	23245-3934	RES MOF 39K 5% 1W
R146	22225-752M	RES CF 7K5 5% 1/4W
R147	22215-391M	RES CF 390R 5% 1/8W
R148	22225-472M	RES CF 4K7 5% 1/4W
R150	22225-101M	RES CF 100R 5% 1/4W
R151	22215-104M	RES CF 100K 5% 1/8W
R152	22215-472M	RES CF 4K7 5% 1/8W
R155	22215-562M	RES CF 5K6 5% 1/8W
R157	23245-1584	RES MOF 0.15R 5% 1W
R158	22225-103M	RES CF 10K 5% 1/4W
R201	23755-1004	RES MOF 10R 5% 2W
R202	22225-363M	RES CF 36K 5% 1/4W
R203	22225-123M	RES CF 12K 5% 1/4W
R207	22225-229M	RES CF 2R2 5% 1/4W

LOCATION	PART NO.	DESCRIPTION
R208	23245-2214	RES MOF 220R 5% 1W
R223	23755-1004	RES MOF 10R 5% 2W
R223	23755-5694	RES MOF 5R6 5% 2W
R226	23245-1094	RES MOF 1R 5% 1W
R233	22225-562M	RES CF 5K6 5% 1/4W
R233	23A21S045M	RES MF 5K76 1% 1/4W
R234	22225-562M	RES CF 5K6 5% 1/4W
R234	23A21S045M	RES MF 5K76 1% 1/4W
R301	22225-101M	RES CF 100R 5% 1/4W
R302	22225-101M	RES CF 100R 5% 1/4W
R303	23A11S007M	RES MF 5K62 1% 1/8W
R304	22215-222M	RES CF 2K2 5% 1/8W
R305	22215-823M	RES CF 82K 5% 1/8W
R306	23A11S035M	RES MF 19K6 1% 1/8W
R308	22215-473M	RES CF 47K 5% 1/8W
R309	22225-472M	RES CF 4K7 5% 1/4W
R310	22225-274M	RES CF 270K 5% 1/4W
R311	22215-102M	RES CF 1K 5% 1/8W
R312	22215-473M	RES CF 47K 5% 1/8W
R313	22215-304M	RES CF 300K 5% 1/8W
R314	23755-1004	RES MOF 10R 5% 2W
R315	23A11-472M	RES MF 4K7 1% 1/8W
R316	23A11-103M	RES MF 10K 1% 1/8W
R317	22215-103M	RES CF 10K 5% 1/8W
R318	23A21-103M	RES MF 10K 1% 1/4W
R333	22225-101M	RES CF 100R 5% 1/4W
R336	22215-102M	RES CF 1K 5% 1/8W
R337	22215-102M	RES CF 1K 5% 1/8W
R338	22215-100M	RES CF 10R 5% 1/8W
R339	22215-472M	RES CF 4K7 5% 1/8W
R340	22215-101M	RES CF 100R 5% 1/8W
R341	23755-1004	RES MOF 10R 5% 2W
R342	22245-2211	RES CF 220R 5% 1/2W
R346	23245-1504	RES MOF 15R 5% 1W
R349	22215-470M	RES CF 47R 5% 1/8W
R350	23245-1594	RES MOF 1R5 5% 1W
R353	22225-912M	RES CF 9K1 5% 1/4W
R357	22225-221M	RES CF 220R 5% 1/4W
R361	22215-472M	RES CF 4K7 5% 1/8W
R362	22225-472M	RES CF 4K7 5% 1/4W
R364	22215-472M	RES CF 4K7 5% 1/8W
R366	23755-1814	RES MOF 180R 5% 2W
R367	22215-472M	RES CF 4K7 5% 1/8W
R370	22225-101M	RES CF 100R 5% 1/4W
R371	22225-101M	RES CF 100R 5% 1/4W
R372	22225-101M	RES CF 100R 5% 1/4W
R373	22225-330M	RES CF 33R 5% 1/4W
R374	22215-272M	RES CF 2K7 5% 1/8W
R381	22245-3301	RES CF 33R 5% 1/2W
R383	23245-1594	RES MOF 1R5 5% 1W
R401	22215-472M	RES CF 4K7 5% 1/8W
R402	22215-560M	RES CF 56R 5% 1/8W
R408	23A21-143M	RES MF 14K 1% 1/4W
R411	22225-102M	RES CF 1K 5% 1/4W
R412	23A11-433M	RES MF 43K 1% 1/8W
R413	22215-102M	RES CF 1K 5% 1/8W
R414	22215-103M	RES CF 10K 5% 1/8W
R415	22215-105M	RES CF 1M 5% 1/8W
R416	22245-1021	RES CF 1K 5% 1/2W
R423	22215-271M	RES CF 270R 5% 1/8W
R424	22215-432M	RES CF 4K3 5% 1/8W
R425	22215-393M	RES CF 39K 5% 1/8W
R426	22215-472M	RES CF 4K7 5% 1/8W
R427	22215-100M	RES CF 10R 5% 1/8W
R428	22215-471M	RES CF 470R 5% 1/8W
R430	22225-330M	RES CF 33R 5% 1/4W
R431	22215-621M	RES CF 620R 5% 1/8W
R433	22225-101M	RES CF 100R 5% 1/4W
R435	22215-221M	RES CF 220R 5% 1/8W
R436	23A21-472M	RES MF 4K7 1% 1/4W
R438	23A11-472M	RES MF 4K7 1% 1/8W
R439	23A21S036M	RES MF 88K7 1% 1/4W
R440	22245-2741	RES CF 270K 5% 1/2W
R441	23A11S060M	RES MF 14K3 1% 1/8W
R442	23A21-114M	RES MF 110K 1% 1/4W
R443	23A11-223M	RES MF 22K 1% 1/8W
R445	22225-333M	RES CF 33K 5% 1/4W
R446	22215-333M	RES CF 33K 5% 1/8W
R448	23A21-203M	RES MF 20K 1% 1/4W
R449	22215-223M	RES CF 22K 5% 1/8W
R451	22245-1041	RES CF 100K 5% 1/2W
R452	22245-1041	RES CF 100K 5% 1/2W
R453	22215-473M	RES CF 47K 5% 1/8W
R454	23A21-104M	RES MF 100K 1% 1/4W
R455	23A11-472M	RES MF 4K7 1% 1/8W
R455	23A11S023M	RES MF 3K45 1% 1/8W
R456	22215-102M	RES CF 1K 5% 1/8W
R457	22215-102M	RES CF 1K 5% 1/8W
R458	23A11-751M	RES MF 750R 1% 1/8W
R461	22215-331M	RES CF 330R 5% 1/8W
R462	23245-398D	RES MOF 0.39R 5% 1W
R465	22225-100M	RES CF 10R 5% 1/4W
R468	22225-101M	RES CF 100R 5% 1/4W
R472	23A11-742M	RES MF 7K4 1% 1/8W
R502	22215-103M	RES CF 10K 5% 1/8W
R503	22215-103M	RES CF 10K 5% 1/8W
R504	22215-272M	RES CF 2K7 5% 1/8W
R505	22215-471M	RES CF 470R 5% 1/8W
R506	22215-102M	RES CF 1K 5% 1/8W
R508	22225-471M	RES CF 470R 5% 1/4W
R509	22225-472M	RES CF 4K7 5% 1/4W
R510	22225-471M	RES CF 470R 5% 1/4W
R511	22225-683M	RES CF 68K 5% 1/4W
R514	22215-681M	RES CF 680R 5% 1/8W
R515	22215-102M	RES CF 1K 5% 1/8W
R516	22215-222M	RES CF 2K2 5% 1/8W
R527	22215-102M	RES CF 1K 5% 1/8W
R530	22215-432M	RES CF 4K3 5% 1/8W
R531	22215-271M	RES CF 270R 5% 1/8W
R532	22215-432M	RES CF 4K3 5% 1/8W
R533	22215-102M	RES CF 1K 5% 1/8W
R534	22215-101M	RES CF 100R 5% 1/8W

LOCATION	PART NO.	DESCRIPTION
R535	22215-101M	RES CF 100R 5% 1/8W
R536	22225-102M	RES CF 1K 5% 1/4W
R537	22225-272M	RES CF 2K7 5% 1/4W
R538	22225-101M	RES CF 100R 5% 1/4W
R539	22215-562M	RES CF 5K6 5% 1/8W
R541	22215-303M	RES CF 30K 5% 1/8W
R542	22215-822M	RES CF 8K2 5% 1/8W
R544	22215-303M	RES CF 30K 5% 1/8W
R545	22215-183M	RES CF 18K 5% 1/8W
R547	22225-750M	RES CF 75R 5% 1/4W
R548	22225-271M	RES CF 270R 5% 1/4W
R549	23A11-222M	RES MF 2K2 1% 1/8W
R553	22215-101M	RES CF 100R 5% 1/8W
R555	22215-102M	RES CF 1K 5% 1/8W
R556	22215-432M	RES CF 4K3 5% 1/8W
R601	23A11-750M	RES MF 75R 1% 1/8W
R602	23A11-750M	RES MF 75R 1% 1/8W
R603	23A11-750M	RES MF 75R 1% 1/8W
R605	22245-1011	RES CF 100R 5% 1/2W
R606	22215-182M	RES CF 1K8 5% 1/8W
R608	22225-101M	RES CF 100R 5% 1/4W
R609	22215-391M	RES CF 390R 5% 1/8W
R610	22215-391M	RES CF 390R 5% 1/8W
R611	22215-391M	RES CF 390R 5% 1/8W
R612	22225-101M	RES CF 100R 5% 1/4W
R615	23A11-473M	RES MF 47K 1% 1/8W
R616	23A11-862M	RES MF 8K6 1% 1/8W
R620	22245-3331	RES CF 33K 5% 1/2W
R622	22215-242M	RES CF 2K4 5% 1/8W
R623	22225-101M	RES CF 100R 5% 1/4W
R624	22225-101M	RES CF 100R 5% 1/4W
R625	22225-101M	RES CF 100R 5% 1/4W
R626	22215-471M	RES CF 470R 5% 1/8W
R627	22215-471M	RES CF 470R 5% 1/8W
R628	22245-4701	RES CF 47R 5% 1/2W
R631	22225-224M	RES CF 220K 5% 1/4W
R632	22225-433M	RES CF 43K 5% 1/4W
R633	22215-560M	RES CF 56R 5% 1/8W
R634	22225-121M	RES CF 120R 5% 1/4W
R634	22225-470M	RES CF 47R 5% 1/4W
R637	22245-4701	RES CF 47R 5% 1/2W
R638	22225-563M	RES CF 56K 5% 1/4W
R639	22215-562M	RES CF 5K6 5% 1/8W
R643	22225-102M	RES CF 1K 5% 1/4W
R646	22215-102M	RES CF 1K 5% 1/8W
R648	22215-101M	RES CF 100R 5% 1/8W
R651	22225-224M	RES CF 220K 5% 1/4W
R652	22225-433M	RES CF 43K 5% 1/4W
R653	22215-560M	RES CF 56R 5% 1/8W
R654	22225-121M	RES CF 120R 5% 1/4W
R654	22225-470M	RES CF 47R 5% 1/4W
R658	22215-563M	RES CF 56K 5% 1/8W
R659	22215-562M	RES CF 5K6 5% 1/8W
R660	22215-752M	RES CF 7K5 5% 1/8W
R663	22225-102M	RES CF 1K 5% 1/4W
R665	22215-101M	RES CF 100R 5% 1/8W
R666	22225-472M	RES CF 4K7 5% 1/4W
R667	22215-471M	RES CF 470R 5% 1/8W
R668	22215-101M	RES CF 100R 5% 1/8W
R669	22215-471M	RES CF 470R 5% 1/8W
R671	22225-224M	RES CF 220K 5% 1/4W
R672	22225-433M	RES CF 43K 5% 1/4W
R673	22225-470M	RES CF 47R 5% 1/4W
R674	22225-121M	RES CF 120R 5% 1/4W
R674	22225-470M	RES CF 47R 5% 1/4W
R676	22215-471M	RES CF 470R 5% 1/8W
R677	22245-4701	RES CF 47R 5% 1/2W
R678	22215-563M	RES CF 56K 5% 1/8W
R679	22215-562M	RES CF 5K6 5% 1/8W
R680	22225-681M	RES CF 680R 5% 1/4W
R683	22225-102M	RES CF 1K 5% 1/4W
R689	22225-109M	RES CF 1R 5% 1/4W

VARIABLE RESISTOR

VR101	25B20-103B	RES POT 10KB 0.1W
VR102	25B20-102B	RES POT 1KB 0.1W
VR103	25B20-502B	RES POT 5KB 0.1W
VR302	25B43-101BH	RES POT 100R 0.5W
VR402	25AA0-203B	RES POT 20KB 0.1W

CAPACITOR

C101	42A77-474F	CAP 0.47U 20% AC250V
C102	42D77-2224	CAP 2200P 20% AC250V
C103	42D77-2224	CAP 2200P 20% AC250V
C104	28ED7-2216	CAP E 220U 20% 400V
C105	28HB7-4701	CAP E 47U 20% 250V
C106	39446-1038	CAP C 0.01U 10% 500V
C107	35155-125CM	CAP MPP 1U2 5% 400V
C108	28A47-4711	CAP E 470U 20% 25V
C111	28A47-151R	CAP E 150U 20% 25V
C113	31115-223R	CAP PEI 0.022U 5% 50V
C114	346B5-104R	CAP MPE 0.1U 5% 63V
C116	32115-332R	CAP PEN 3300P 5% 50V
C117	39146-561R	CAP C 560P 10% 50V
C118	31115-102R	CAP PEI 1000P 5% 50V
C120	39446-1038	CAP C 0.01U 10% 500V
C121	28A97-1011	CAP E 100U 20% 100V
C122	39546-470R	CAP C 47P 10% 1KV Y5P
C123	28A47-1021	CAP E 1000U 20% 25V
C124	42A77-104C	CAP 0.1U 20% AC250V
C125	28H37-1021	CAP E 1000U 20% 16V
C126	39546-470R	CAP C 47P 10% 1KV Y5P
C127	39546-102R	CAP CERAMIC 1KV
C128	28H37-1021	CAP E 1000U 20% 16V
C129	28H37-471R	CAP E 470U 20% 16V
C131	39546-101R	CAP C 100P 10% 1KV
C134	42D77-2224	CAP 2200P 20% AC250V
C135	39999-104R	CAP C 0.1U +80-20% 50V
C136	39146-103R	CAP C 0.01U 10% 50V

LOCATION	PART NO.	DESCRIPTION
C137	28HB7-1015	CAP E 100U 20% 250V
C139	34145-1044	CAP MPE 0.1U 5% 250V
C141	39546-221R	CAP C 220P 10% 1KV
C142	39446-1038	CAP C 0.01U 10% 500V
C143	39446-1038	CAP C 0.01U 10% 500V
C151	28H37-101R	CAP E 100U 20% 16V
C152	28H67-100R	CAP E 10U 20% 50V
C154	39146-102R	CAP C 1000P 10% 50V
C205	28H47-1021	CAP E 1000U 20% 25V
C207	346B5-104R	CAP MPE 0.1U 5% 63V
C209	31115-103R	CAP PEI 0.01U 5% 50V
C210	39146-103R	CAP C 0.01U 10% 50V
C223	28H47-1021	CAP E 1000U 20% 25V
C225	28H57-101R	CAP E 100U 20% 35V
C301	31115-104R	CAP PEI 0.1U 5% 50V
C302	31115-103R	CAP PEI 0.01U 5% 50V
C303	33112-821R	CAP PPN 820P 2% 50V
C304	32115-103R	CAP PEN 0.01U 5% 50V
C305	28H67-479R	CAP E 4U7 20% 50V
C306	28H67-479R	CAP E 4U7 20% 50V
C307	38115-221R	CAP C 220P 5% 50V
C308	39999-104R	CAP C 0.1U +80-20% 50V
C310	31115-102R	CAP PEI 1000P 5% 50V
C311	33112-222R	CAP PPN 2200P 2% 50V
C312	28H37-470R	CAP E 47U 20% 16V
C313	28H37-471R	CAP E 470U 20% 16V
C314	28H37-470R	CAP E 47U 20% 16V
C315	346B5-474R	CAP MPE 0.47U 5% 63V
C316	346B5-154R	CAP MPE 0.15U 5% 63V
C317	39999-104R	CAP C 0.1U +80-20% 50V
C318	28H37-471R	CAP E 470U 20% 16V
C319	38115-221R	CAP C 220P 5% 50V
C329	39446-102R	CAP C 1000P 10% 500V
C330	39999-104R	CAP C 0.1U +80-20% 50V
C332	34145-4734	CAP MPE 0.047U 5% 250V
C333	28H37-331R	CAP E 330U 20% 16V
C334	28HB7-1015	CAP E 100U 20% 250V
C335	375B5S4727M	CAP PPS 4700P 5% 2KV
C336	28H37-221R	CAP E 220U 20% 16V
C337	39446-222R	CAP C 2200P 10% 500V
C338	39546-101R	CAP C 100P 10% 1KV
C339	39546-101R	CAP C 100P 10% 1KV
C340	39446-222R	CAP C 2200P 10% 500V
C341	35155A2046	CAP MPP 0.2U 5% 400V
C342	28HB7-109R	CAP E 1U 20% 250V
C346	39146-103R	CAP C 0.01U 10% 50V
C348	39146-103R	CAP C 0.01U 10% 50V
C349	28H37-101R	CAP E 100U 20% 16V
C353	35155A6836M	CAP MPP 0.068U 5% 400V
C355	39999-104R	CAP C 0.1U +80-20% 50V
C359	35145-125C	CAP MPP 1U2 5% 250V
C360	28H67-479R	CAP E 4U7 20% 50V
C361	35155H3347	CAP MPP 0.33U 5% 400V
C363	39546-121R	CAP C 120P 10% 1KV
C365	39D56-221R	CAP C 220P 10% DF0 2.2KV
C367	32115-332R	CAP PEN 3300P 5% 50V
C371	28H67-479R	CAP E 4U7 20% 50V
C401	28HB7-4701	CAP E 47U 20% 250V
C402	34145-4734	CAP MPE 0.047U 5% 250V
! C404	375A5S2226M	CAP PPS 2200P 5% 1.6KV
C405	28HB7-2201	CAP E 22U 20% 250V
C406	28H67-100R	CAP E 10U 20% 50V
C413	31115-102R	CAP PEI 1000P 5% 50V
C414	31115-104R	CAP PEI 0.1U 5% 50V
C415	39146-331R	CAP C 330P 10% 50V
C418	31115-222R	CAP PEI 2200P 5% 50V
C419	39146-103R	CAP C 0.01U 10% 50V
C420	28H37-101R	CAP E 100U 20% 16V
C421	28H67-100R	CAP E 10U 20% 50V
C422	38115-221R	CAP C 220P 5% 50V
C423	31115-104R	CAP PEI 0.1U 5% 50V
C424	28H97-109R	CAP E 1U 20% 100V
C425	31115-222R	CAP PEI 2200P 5% 50V
C428	28H37-101R	CAP E 100U 20% 16V
C429	32115-102R	CAP PEN 1000P 5% 50V
C430	31115-682R	CAP PEI 6800P 5% 50V
C431	28457-100R	CAP E 10U 20% 35V
C432	38115-330R	CAP C 33P 5% 50V
C434	346B5-474R	CAP MPE 0.47U 5% 63V
C460	38115-101R	CAP C 100P 5% 50V
C501	39146-471R	CAP C 470P 10% 50V
C504	28H27-221R	CAP E 220U 20% 10V
C505	38115-330R	CAP C 33P 5% 50V
C506	38115-330R	CAP C 33P 5% 50V
C511	28H67-479R	CAP E 4U7 20% 50V
C514	38115-330R	CAP C 33P 5% 50V
C516	38115-101R	CAP C 100P 5% 50V
C518	28H67-100R	CAP E 10U 20% 50V
C519	39146-103R	CAP C 0.01U 10% 50V
C520	39999-104R	CAP C 0.1U +80-20% 50V
C521	28H27-221R	CAP E 220U 20% 10V
C522	39999-104R	CAP C 0.1U +80-20% 50V
C524	28H67-109R	CAP E 1U 20% 50V
C525	31115-102R	CAP PEI 1000P 5% 50V
C526	31115-102R	CAP PEI 1000P 5% 50V
C527	28H67-479R	CAP E 4U7 20% 50V
C528	39999-104R	CAP C 0.1U +80-20% 50V
C530	38115-221R	CAP C 220P 5% 50V
C533	28H67-100R	CAP E 10U 20% 50V
C534	38115-221R	CAP C 220P 5% 50V
C537	28H67-100R	CAP E 10U 20% 50V
C538	38115-221R	CAP C 220P 5% 50V
C541	39999-104R	CAP C 0.1U +80-20% 50V
C601	28H37-101R	CAP E 100U 20% 16V
C602	28H67-100R	CAP E 10U 20% 50V
C603	28H37-101R	CAP E 100U 20% 16V
C604	28H67-100R	CAP E 10U 20% 50V
C605	28H67-100R	CAP E 10U 20% 50V
C606	39487-103R	CAP C 0.01U 20% 500V
C607	39187-103R	CAP C 0.01U 20% 50V
C608	39187-103R	CAP C 0.01U 20% 50V
C609	39187-103R	CAP C 0.01U 20% 50V

C610	28H37-101R	CAP E 100U 20% 16V
C611	28H37-101R	CAP E 100U 20% 16V
C612	39999-104R	CAP C 0.1U +80-20% 50V
C613	39999-104R	CAP C 0.1U +80-20% 50V

LOCATION	PART NO.	DESCRIPTION	LOCATION	PART NO.	DESCRIPTION
C614	39646-4718	CAP C 470P 10% 2KV	C646	39187-103R	CAP C 0.01U 20% 50V
C615	28H37-101R	CAP E 100U 20% 16V	C650	28H97-109R	CAP E 1U 20% 100V
C616	28H97-220R	CAP E 22U 20% 100V	C651	28H97-220R	CAP E 22U 20% 100V
C617	39446-681R	CAP C 680P 10% 500V	C652	28H97-109R	CAP E 1U 20% 100V
C618	28H37-101R	CAP E 100U 20% 16V	C653	39187-103R	CAP C 0.01U 20% 50V
C619	28H37-101R	CAP E 100U 20% 16V	C654	28H67-479R	CAP E 4U7 20% 50V
C620	39187-103R	CAP C 0.01U 20% 50V	C655	38196-680R	CAP C 68P 10% 50V
C621	28467-229R	CAP E 2U2 20% 50V	C670	28H97-109R	CAP E 1U 20% 100V
C622	39187-103R	CAP C 0.01U 20% 50V	C672	28H97-109R	CAP E 1U 20% 100V
C623	39187-103R	CAP C 0.01U 20% 50V	C673	39187-103R	CAP C 0.01U 20% 50V
C624	39187-103R	CAP C 0.01U 20% 50V	C680	39999-104R	CAP C 0.1U +80-20% 50V
C625	39999-104R	CAP C 0.1U +80-20% 50V	C681	39999-104R	CAP C 0.1U +80-20% 50V
C626	39146-472R	CAP C 4700P 10% 50V	COILS		
C627	28H67-109R	CAP E 1U 20% 50V			
C628	39999-104R	CAP C 0.1U +80-20% 50V	L102	47F00-0240	XFMR FMI FT-24
C629	28H37-101R	CAP E 100U 20% 16V	L103	47F00-0240	XFMR FMI FT-24
C630	28H97-109R	CAP E 1U 20% 100V	L104	47S00-0821	XFMR SPS FR-30
C631	39187-103R	CAP C 0.01U 20% 50V	L105	46N00-0320	COIL LINE CHOKE 2.7mH
C632	28H97-109R	CAP E 1U 20% 100V	L304	46N00-0600	COIL LINE CHOKE 1.3mH
C633	39187-103R	CAP C 0.01U 20% 50V	L311	46N00-0640	COIL LINE CHOKE 4mH
C634	39999-104R	CAP C 0.1U +80-20% 50V	L601	45B0K-101T	COIL PEAKING 100U
C635	39487-103R	CAP C 0.01U 20% 500V	L602	45B0K-101T	COIL PEAKING 100U
C636	38196-680R	CAP C 68P 10% 50V	TRANSFORMER		
C637	38196-680R	CAP C 68P 10% 50V			
C638	38196-680R	CAP C 68P 10% 50V	T101	47S00-1240I	XFMR SPS FR-39
C639	39487-103R	CAP C 0.01U 20% 500V	T303	47D10-0430	XFMR DRIVE FI-19
C640	39187-103R	CAP C 0.01U 20% 50V	T304	47G00-0050I	XFMR CENTER FI-25
C641	39687-1028	CAP C 1000P 20% 2KV	T305	47J00-0101I	XFMR FOCUS FI-22
C642	39999-104R	CAP C 0.1U +80-20% 50V	⊙ T401	47F13-1091S	XFMR FBT
C644	38196-680R	CAP C 68P 10% 50V			

LOCATION	PART NO.	DESCRIPTION
ITEGRATED CIRCUITS		
⊙ IC101	17A06-150G	IC LINEAR 8P DEFLECTION3842
IC102	17A07-171H	IC LINEAR VOTAGE REG XC62AP5002LH 3P
IC103	17B21-090R	IC PHOTO OPTOCUPLER PS2561-M/TLP721F-GR
IC104	17A07-031H	IC LINEAR VOLTAGE REGULATOR 431 3P
IC201	17A06-260H	IC LINEAR 7P DEFLECTIONTDA8172
⊙N IC301	17A06-390G	IC LINEAR 32P DEFLECTIONTDA9112
⊙ IC401	17A06-190G	IC LINEAR 8P DEFLECTIONUC3843B
⊙ IC501	16P40-028F	IC MICRO-PROCESSOR 40P 68P61A OTP 24K
IC502	16M08-009R	IC EEPROM AT24C04 (B)-10PC (BLANK) 8P
◓ IC601	17A04-230V	IC LINEAR 36P VIDEO M52743BSP
◓ IC603	16N20-004U	IC CONTROLLER 20P M35045-080SP
● IC604	17A04-260H	IC LINEAR 3P VIDEO LM2435T
MISCELLANEOUS		
	400630301	CARTON 550*520*434 (PR711FL)

*=0.25	430008300	CARD BOARD 50*50*2170*5T
	510119800	HOLDER E.P.S (TOP)
	510120800	HOLDER E.P.S (BOTTOM)
*=0.622	570001900	PACKTHREAD P.P. (0.015ML=1800M)
CARTON (BOTTOM*3)	584066500	STAPLES NO:33-19

LOCATION	PART NO.	DESCRIPTION
	610001100	SHEEET WARNING
	620422100	USER MANUAL SHEET (TCO99)
	620649100	USER MANUAL (PR711FL)
	650031200	WARRANTY CARD (LCD)
	666350101	INSPECTION CARD 17IN (THAI)
	810025300	SWIVEL DISK
	810045001	SWIVEL BOWL (PS)(87310)
	820076001	CABINET FRONT(PC+ABS)(87310)
	830005001	SWIVEL BASE (PS)(87310)
	7110117000	KNOB POWER (94V0)
	7110118000	FUNCTIION KEY (94V0)
	7141018601	OVERLAY MPRII/CNS/NON CE(PR711FL)
CRT MOUNTING	7465576450	WASHER (CRT)
	7500133000	SHIELD COVER (BOTTOM)(CRT)
SIGNAL CABLE	7620112200	BRACKET BRACK
	7900015202	SUPPORTS SPACER
FOR 11SAX-003A	7900071200	SUPPORT SPACER (SCC-5)
SIGNAL CABLE	7905367300	TIE MINI 18CM (W) BST-180
	11S31-112B	PCB MAIN-S 330*247*1.6MMCHP1797/1786
	11S33-072A	PCB CRT-S 120*120*1.6MMCTA 1797C
	11SAX-003A	PCB SHIELD 25*80.5*1.6MMCFA1797B
BD101	15D68-F000	DI BRIDGE 4A 800V (KBL406G/PBL406)
RP501	16K08-001Z	IC RES ARRAY 10K*7 5% 1/8W (COMMONP1)
RP502	16K09-004Z	IC RES ARRAY 3K3*8 5% 1/8W (COMMON P1)
LED1	19D0A-0060	DI LED BICOLOR W-DIFFUSED(L-59GR/1YGW
CRT	20T17-28CC	C-.24 NG M41LRL15X/70X(17TK)(95K)(NH)
PTC101	26A00-0070	PTCR 14R 20% 2P
NTC101	26B00-0081	NTCR 8R 15% 3A P=7.5MM
SG601	42S00-0060	SPARK GAP 500V
	46G00-0120	COIL DEGAUSSING (165T)
T302	46L00-1190E	LINEAR 150uH N1:12TSN2:600.5TS (A TYPE)
	46Y00-0210	COIL YOKE DEFLECTION (TK95KHZ)
	46Y00-0240	NECK ASSY CONVERGENCE (NA2915-41)
F101	49FB2-402A	FUSE SLOW 4A 250V (NORDIC)
SW501	52P11-0080	SW PRESS W/O LOCK H=6.9MM
SW503	52P11-0080	SW PRESS W/O LOCK H=6.9MM
SW504	52P11-0080	SW PRESS W/O LOCK H=6.9MM
SW502	52P11-0080	SW PRESS W/O LOCK H=6.9MM
SW505	52P11-0080	SW PRESS W/O LOCK H=6.9MM
SW101	52P22-0110	SW PUSH 2P2T0.2A48VDC
RL101	53R001-009S	RELAY COIL DC23V 5A/250V(2-A) SMALL TYPE
RL102	53R001-009S	RELAY COIL DC23V 5A/250V(2-A) SMALL TYPE
	56C63-1802	POWER CORD USA 3P U/C/E1M8-B 125V10A
P302	59J63-1000	JUMPER BOX 2.54 S2*3P
X501	60R01-0010M	RESONATOR 8MHZ
	64C30-0210	SOCKER CRT COLOR-H
IC502	64D11-0010	SOCKET IC SIP 3IN 2.54 DOUBLE LP 8P
IC501	64DB3-0010	SOCKET IC SIP 6IN 2.54DOUBLE LP 40P
P101	64P20-1010	SOCKET POWER
	65S15-1900	CABLE SIGNAL 15D-6H-5H190CM 2.5 BLUE

P401B	65W67-29D0	CONN H/T WIRE 1015#22 6P-1 3.96 29L
P507	65W81340B1	CONN H/H 1007#24 8P-22 5/2.0 40L -T W/C
P104	65WD1333B1	CONN H/T WIRE 1007#24 14P 2.5 33L -T W/C
	859001-401	TAPE STRETCH FILM W=500MM 1500 M/RL
	98T111-P37	DISKETTE 3.51N 1.44M (INF)(CTX VER2.0)

10.0 LAYOUT FOR MAIN COMPONENTS AND ADJUSTED

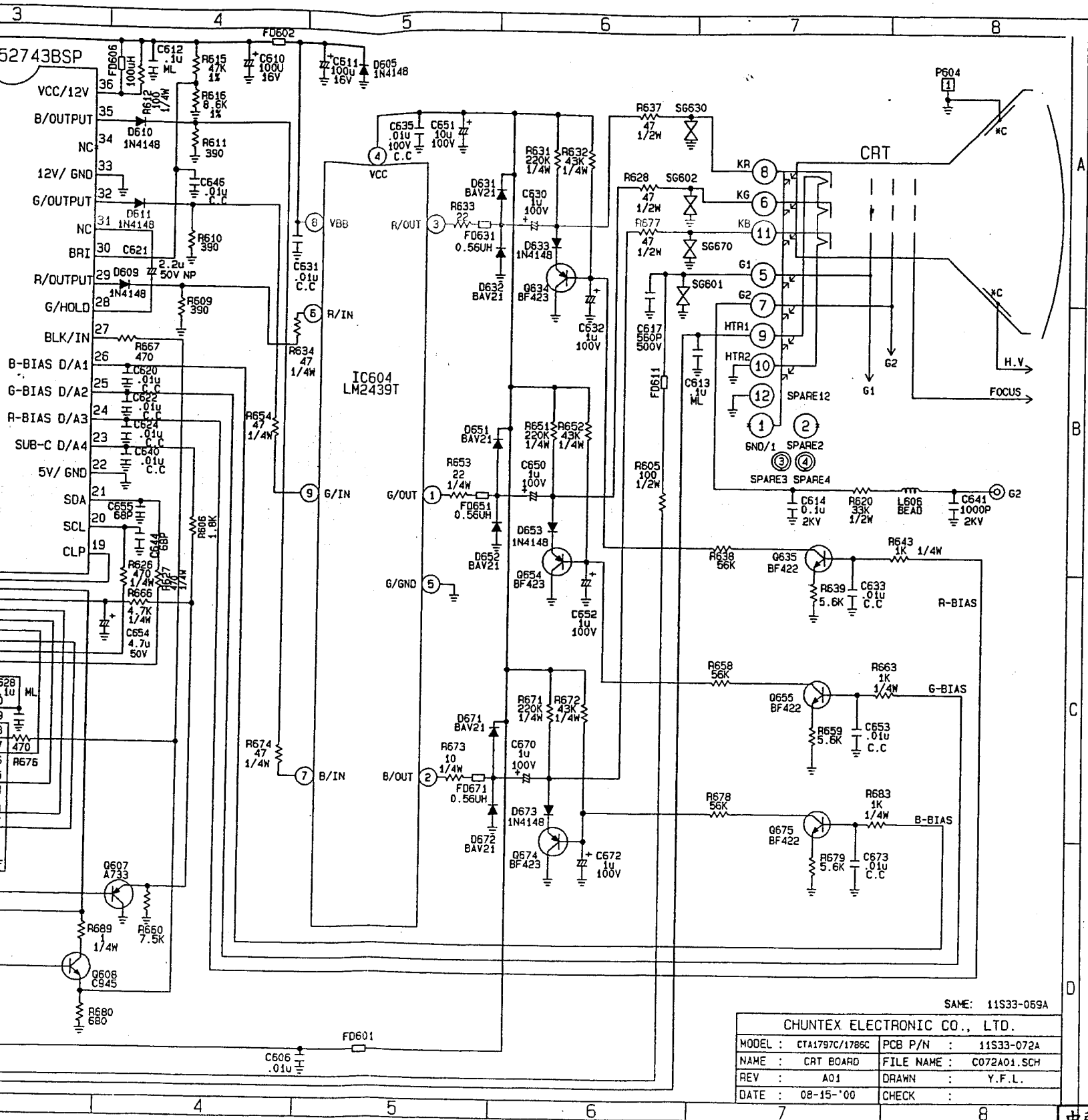
11.0 CIRCUIT DIAGRAM

12.0 EXPLODED VIEW

M E M O

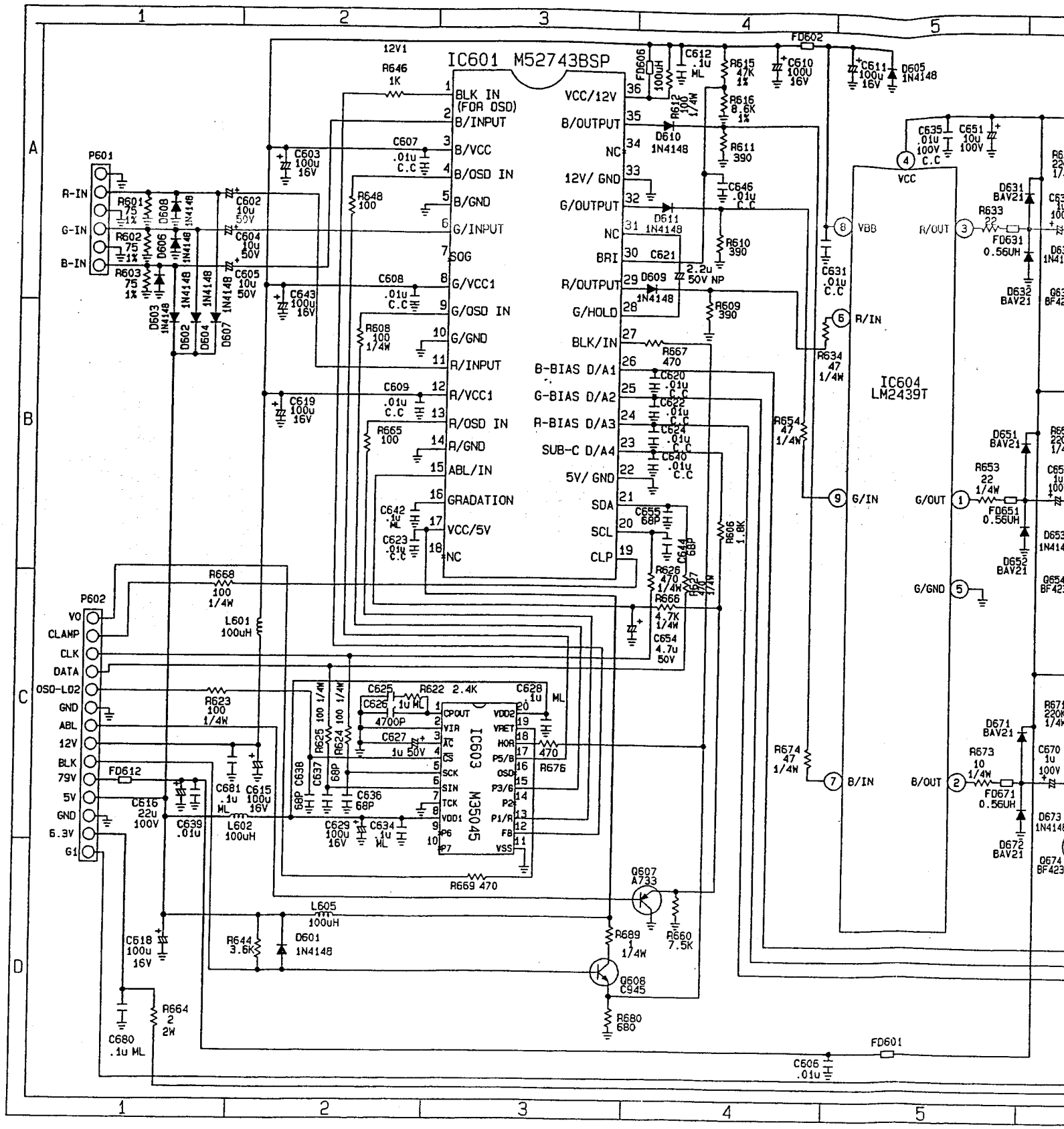
OWNER:_____

PR500F CRA



8W type.
cure value are 85c type.
60V type.

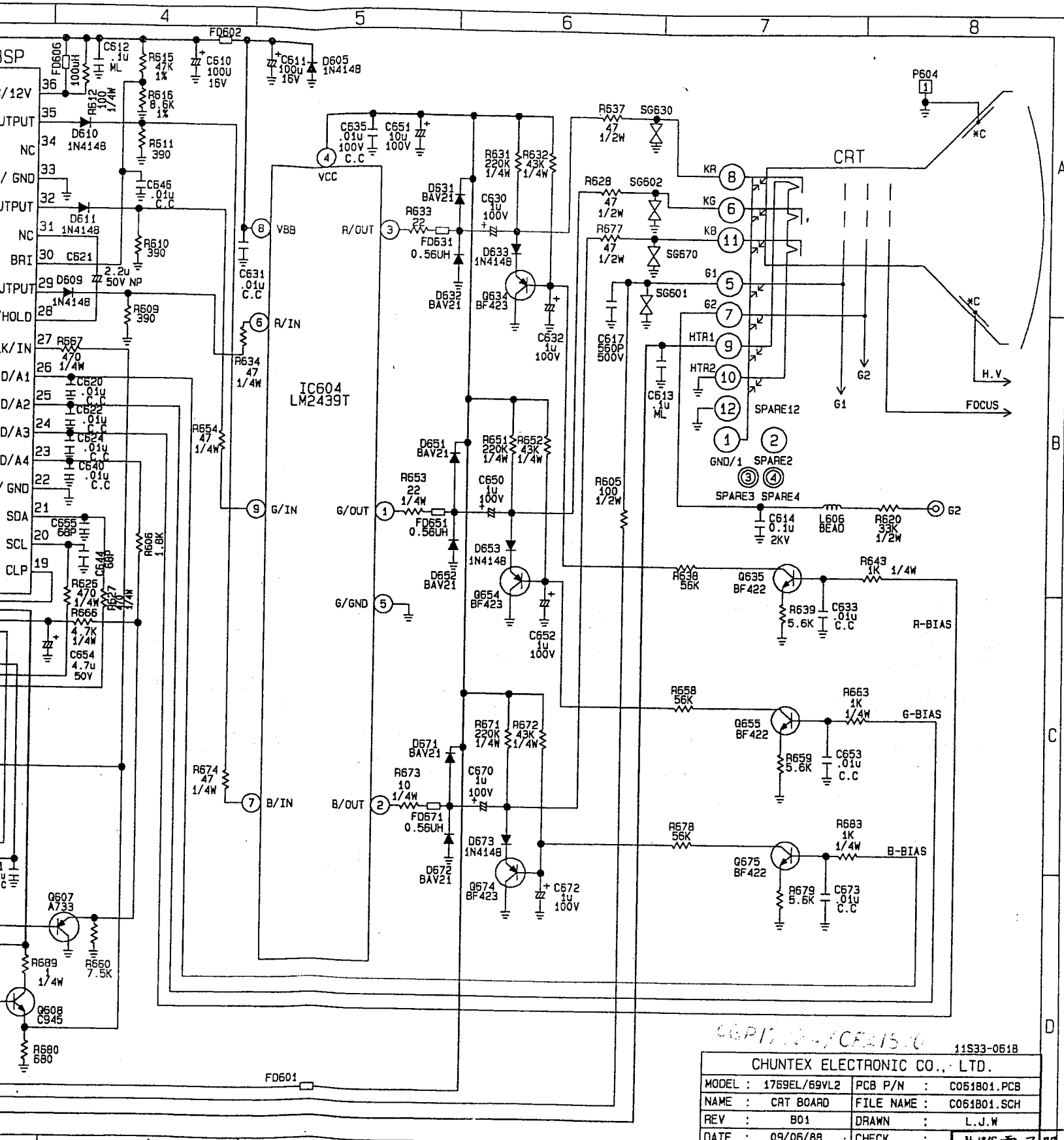
PR500F-CRA1570A



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

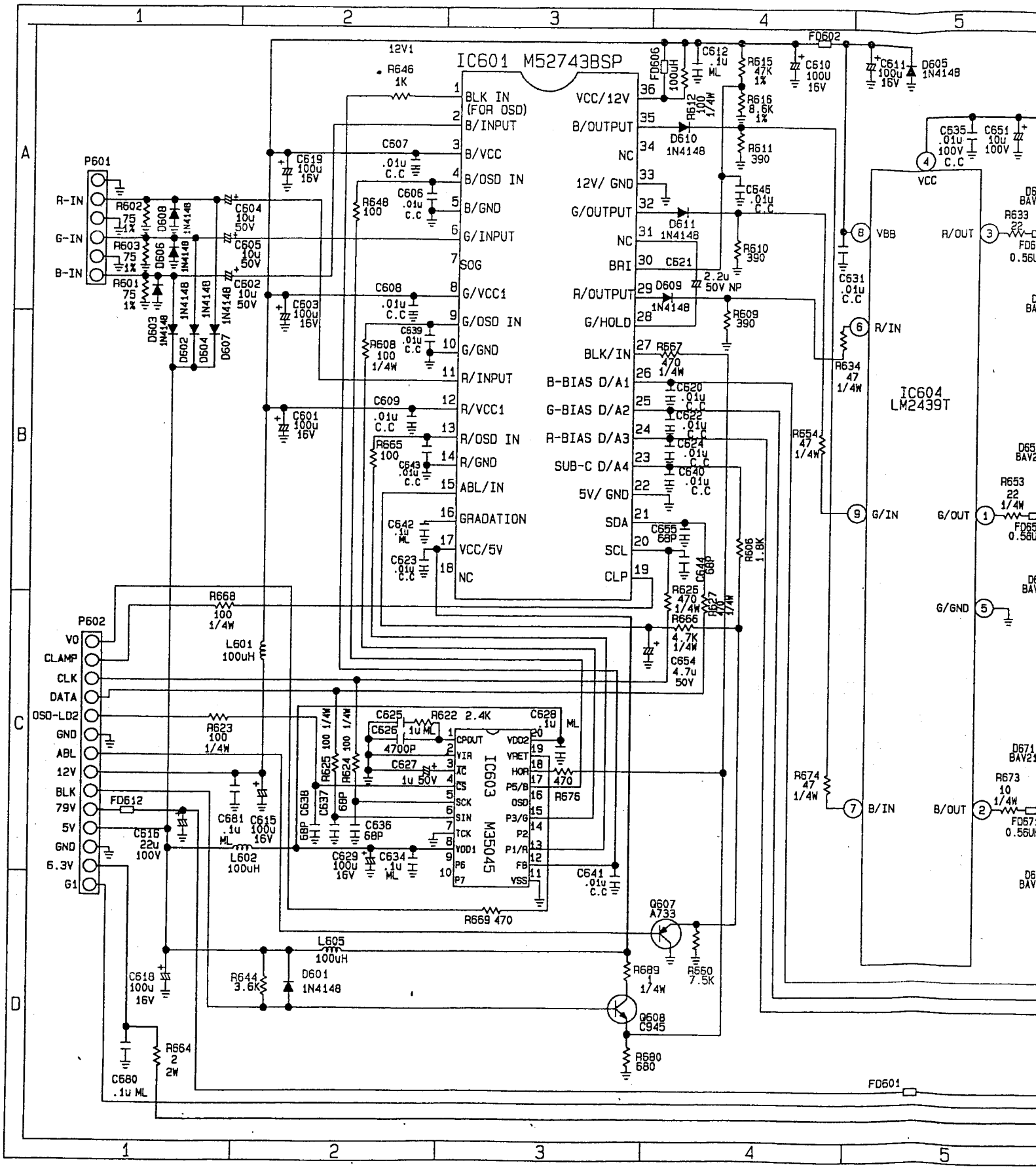
All capacitors not otherwise marked are 50V type.



pe.
alue are 85c type.
pe.

(EX700F)
CHP1772A
CNP1772A

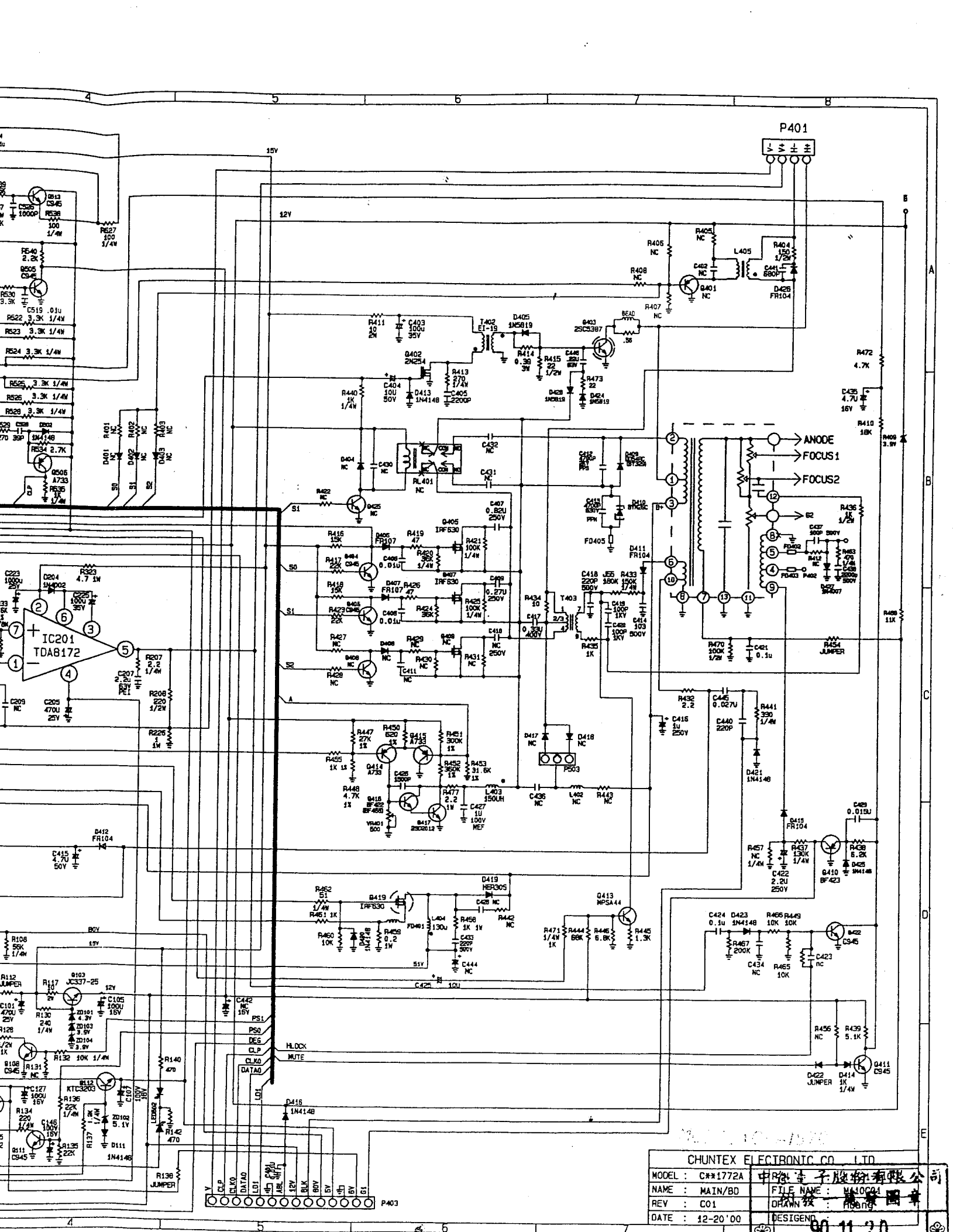
中強電子股
研發一處
90.11
繪圖：陳燦
核准：

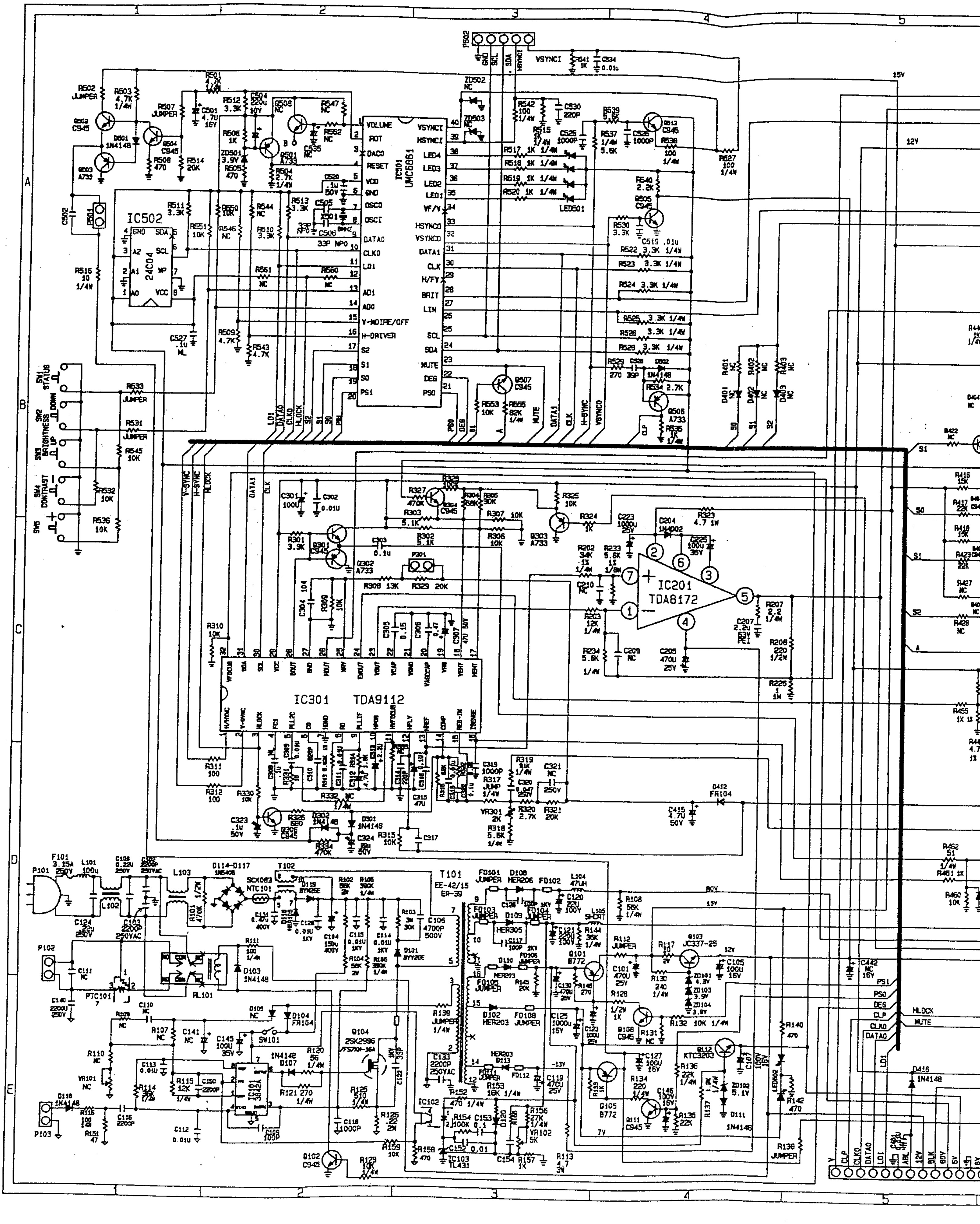


Note: Resistor without specified value are 1/8W type.

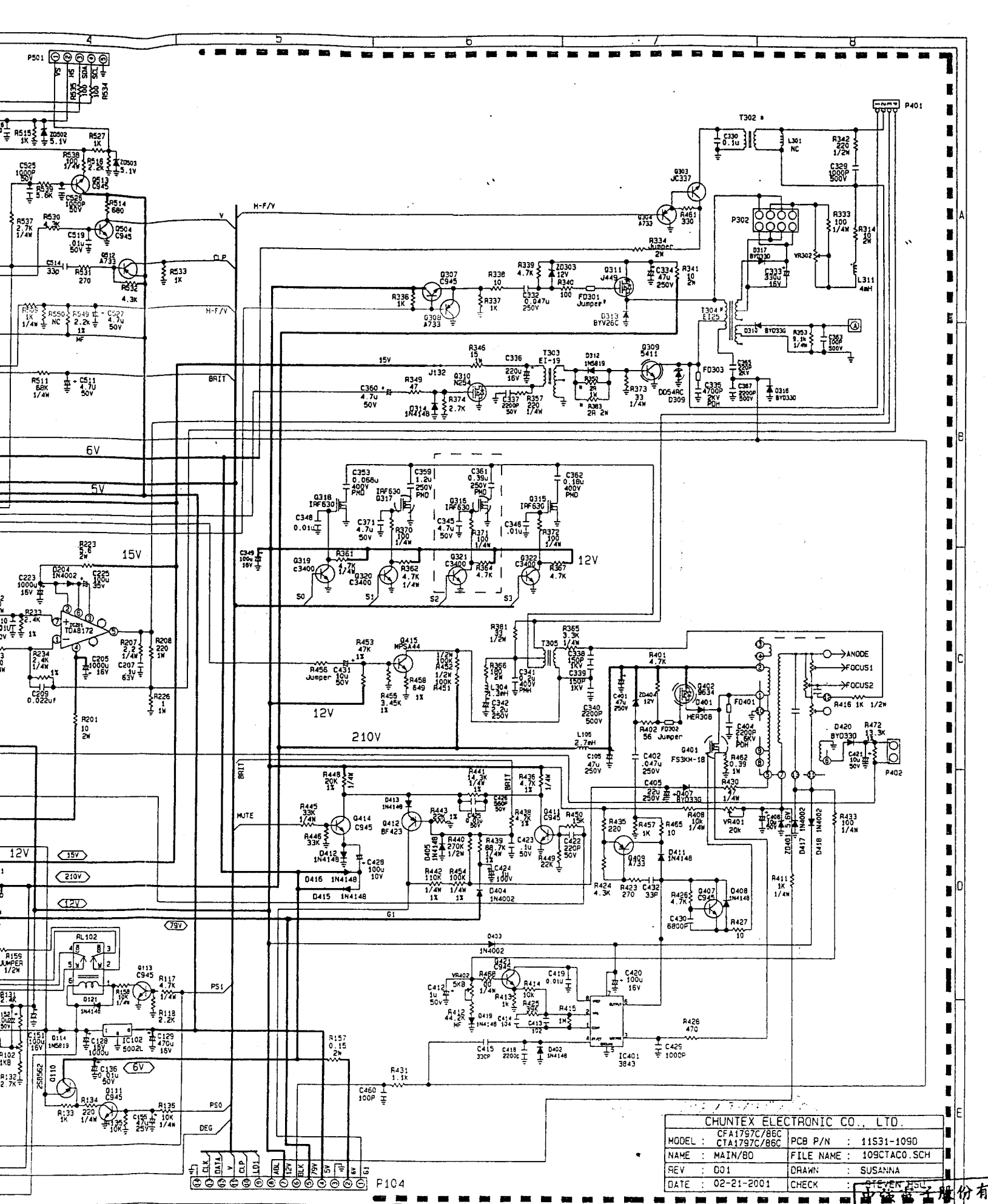
All capacitors without specified temperature value are 85c type.

All capacitors not otherwise marked are 50V type.


P401
ANODE
FOCUS1
FOCUS2
IC201
TDA8172
T402
EI-19
T403
RL401
P503
P403
CHUNTEX ELECTRONIC CO. LTD
MODEL : C**1772A
NAME : MAIN/BD
REV : C01
DATE : 12-20'00
FILE NAME : MA10C01
DRAWN : Huang
DESIGEND
90.11.20
CHP1772A / CNP1772A
(EX700F)

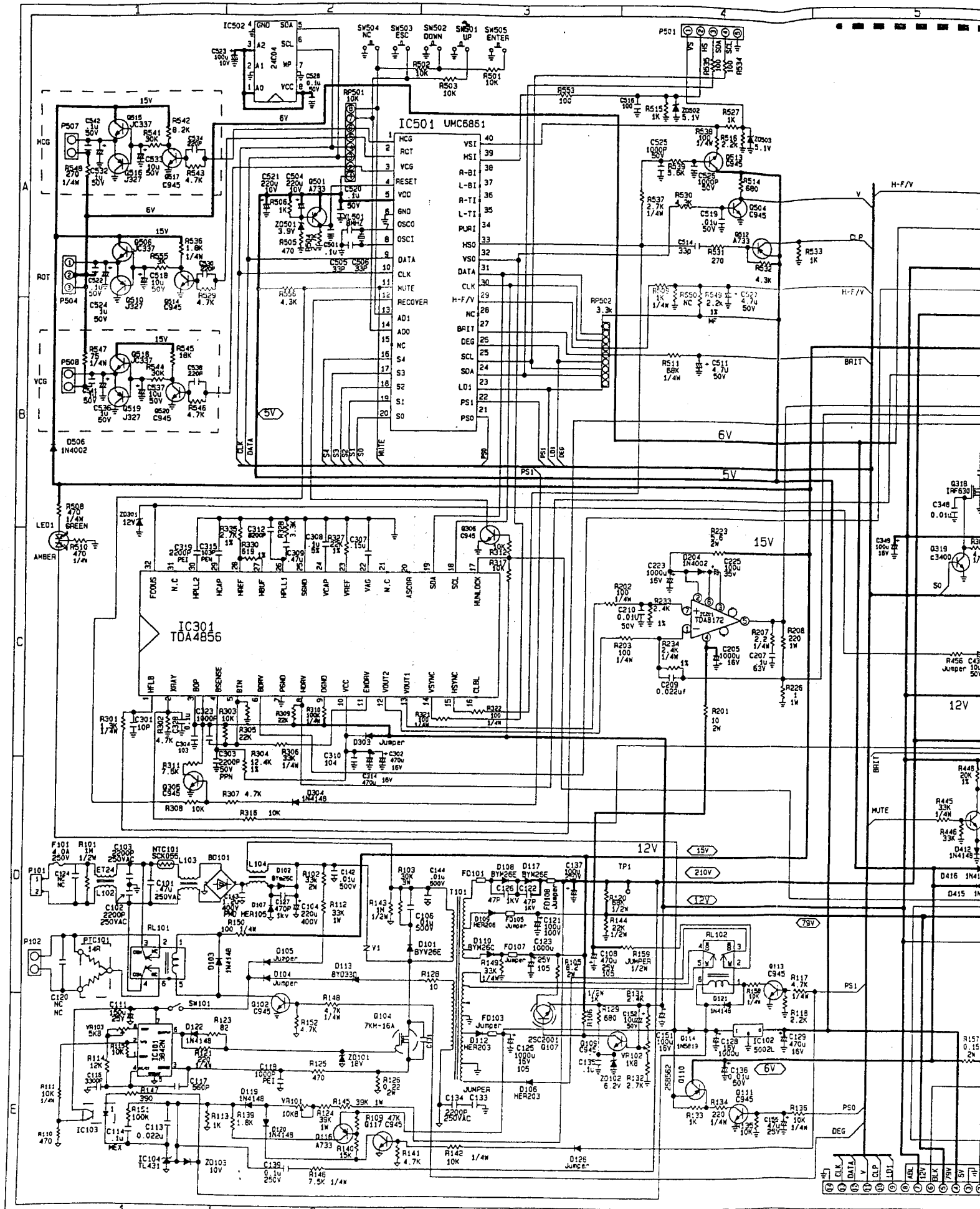


IC502 24C04
IC501 UMC5861
IC301 TDA9112
IC201 TDA8172
IC101 3842A
IC102
IC103 TL431
T101 EE-42/15 ER-39
T102
P101
P102
P103
P501
P502
F101 3.15A 250V
RL101
PTC101
NTC101
SW1 STATUS
SW2 DOWN
SW3 BRIGHTNESS UP
SW4 CONTRAST
SW5
SW101
LED501
LED502
Q104 2SK2996
Q103 JC337-25
Q112 KTC3203
15V
12V
80V
VSYNCI
HSYNCI
VOLUME
ROT
DAC0
RESET
VDD
GND
OSCO
OSCI
DATA0
CLK0
LD1
AD1
AD0
V-MOIRE/OFF
H-DRIVER
S2
S1
S0
PS1
LED4
LED3
LED2
LED1
VF/Y
HSYNCO
VSYNCO
DATA1
CLK
H/FY
BRIT
LIN
SCL
SDA
MUTE
DEG
PS0
HLOCK
CLP



* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

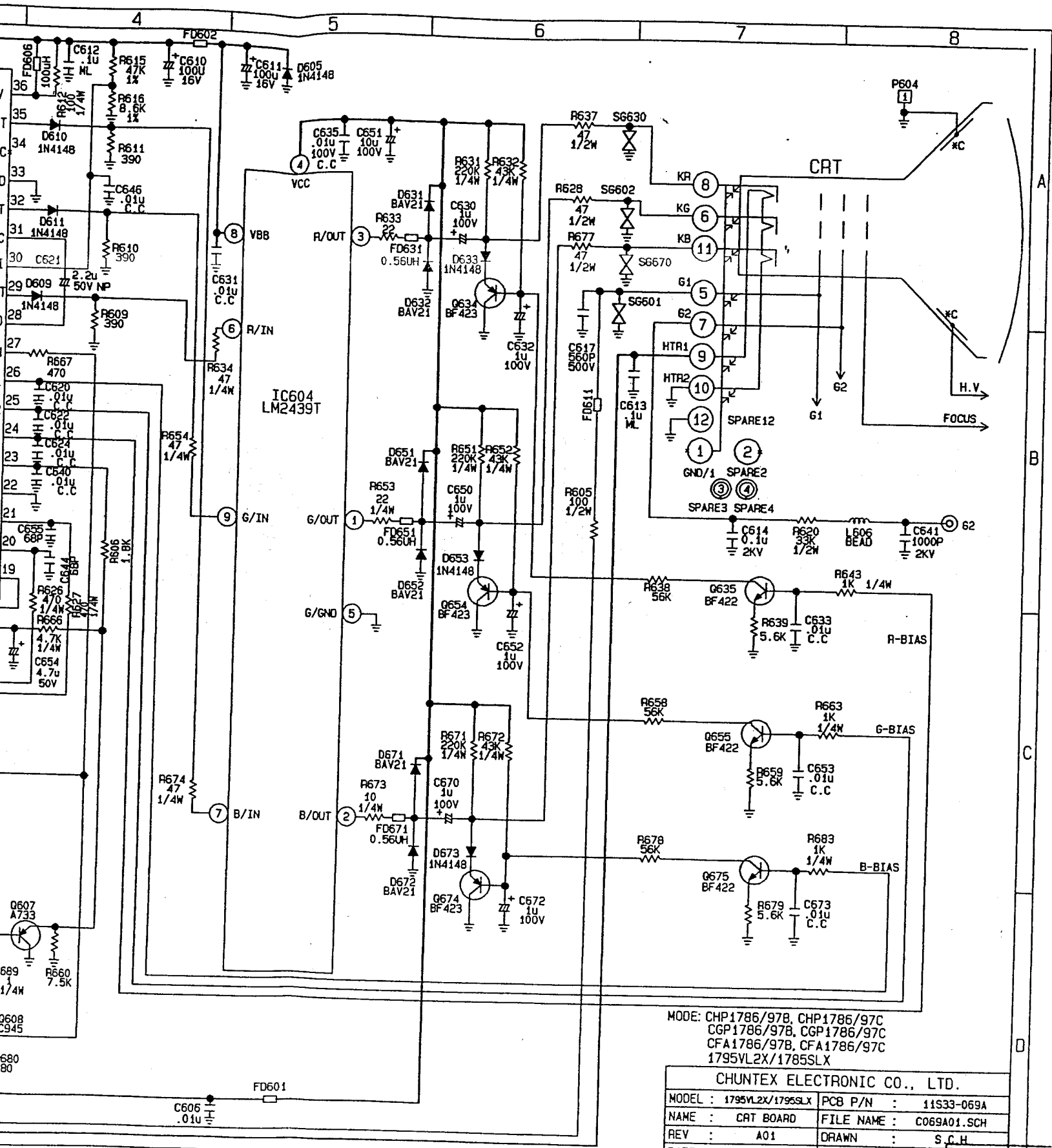
CHP1786C / CNP1786C (EX705F)



* MARKING ARE
* SOME COMPON

CH

EX705R CH



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

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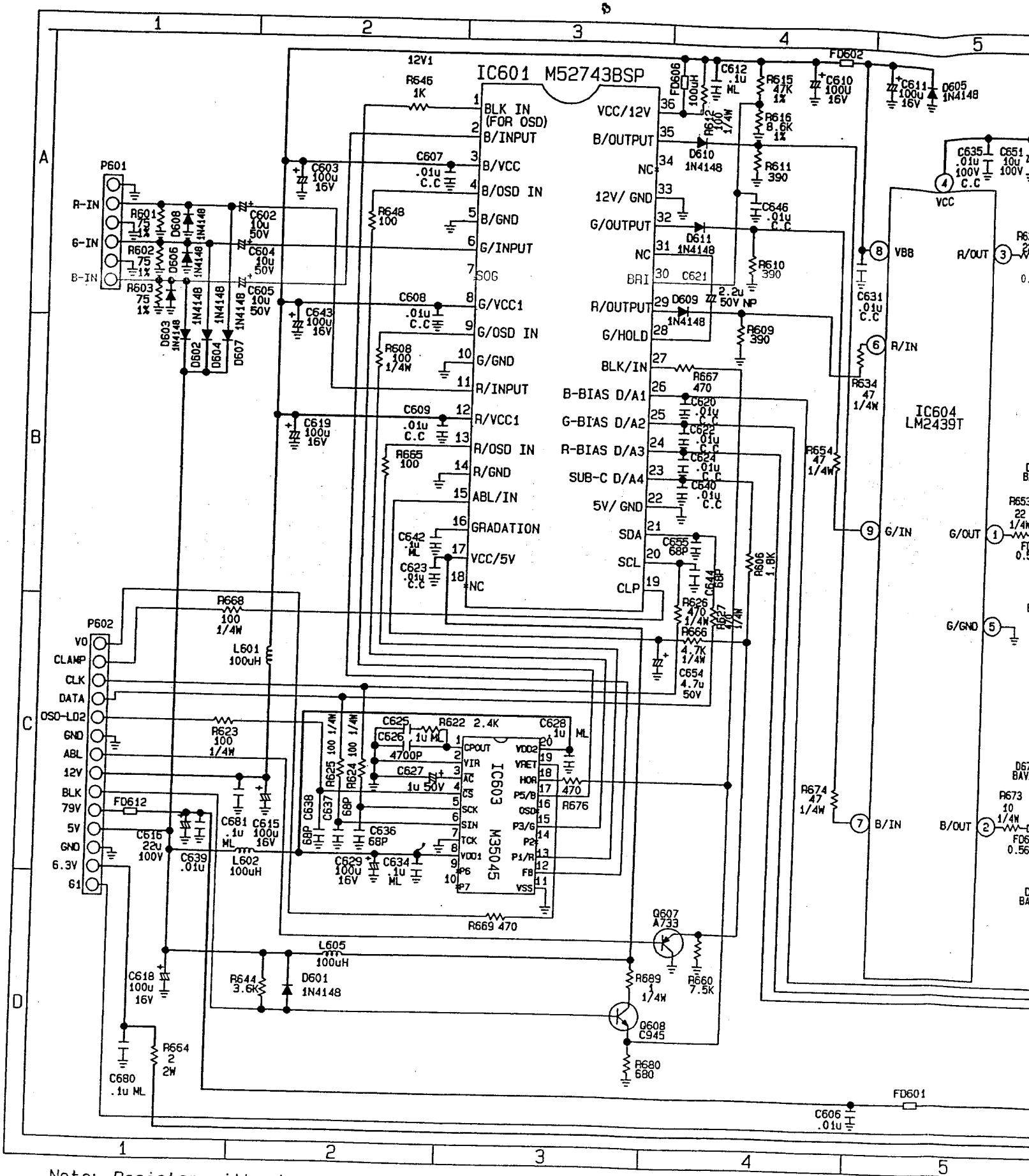
繪圖:
核准:

e are 85c type.

CHP 1786/CHP 1786C
(EX 705F)



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

All capacitors not otherwise marked are 50V type.

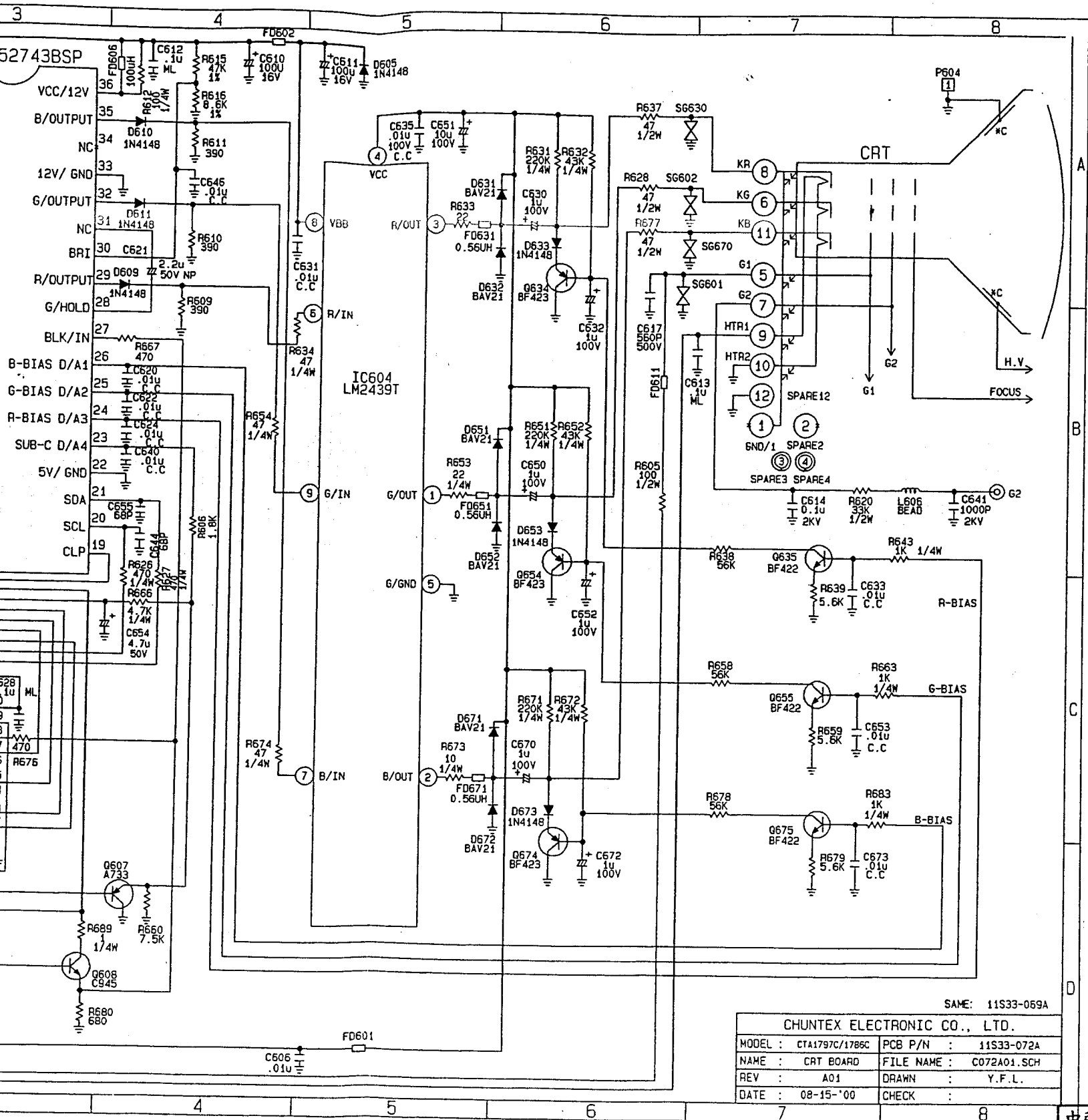
CHUNTEX ELECTRONIC CO., LTD.			
MODEL :	CFA1797C/86C CTA1797C/86C	PCB P/N :	11S31-1090
NAME :	MAIN/BD	FILE NAME :	109CTAC0.SCH
REV :	001	DRAWN :	SUSANNA
DATE :	02-21-2001	CHECK :	STEVEN HSU

* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

CHP 1797C / CK2 1797 / CMP 1797
(CX710F)

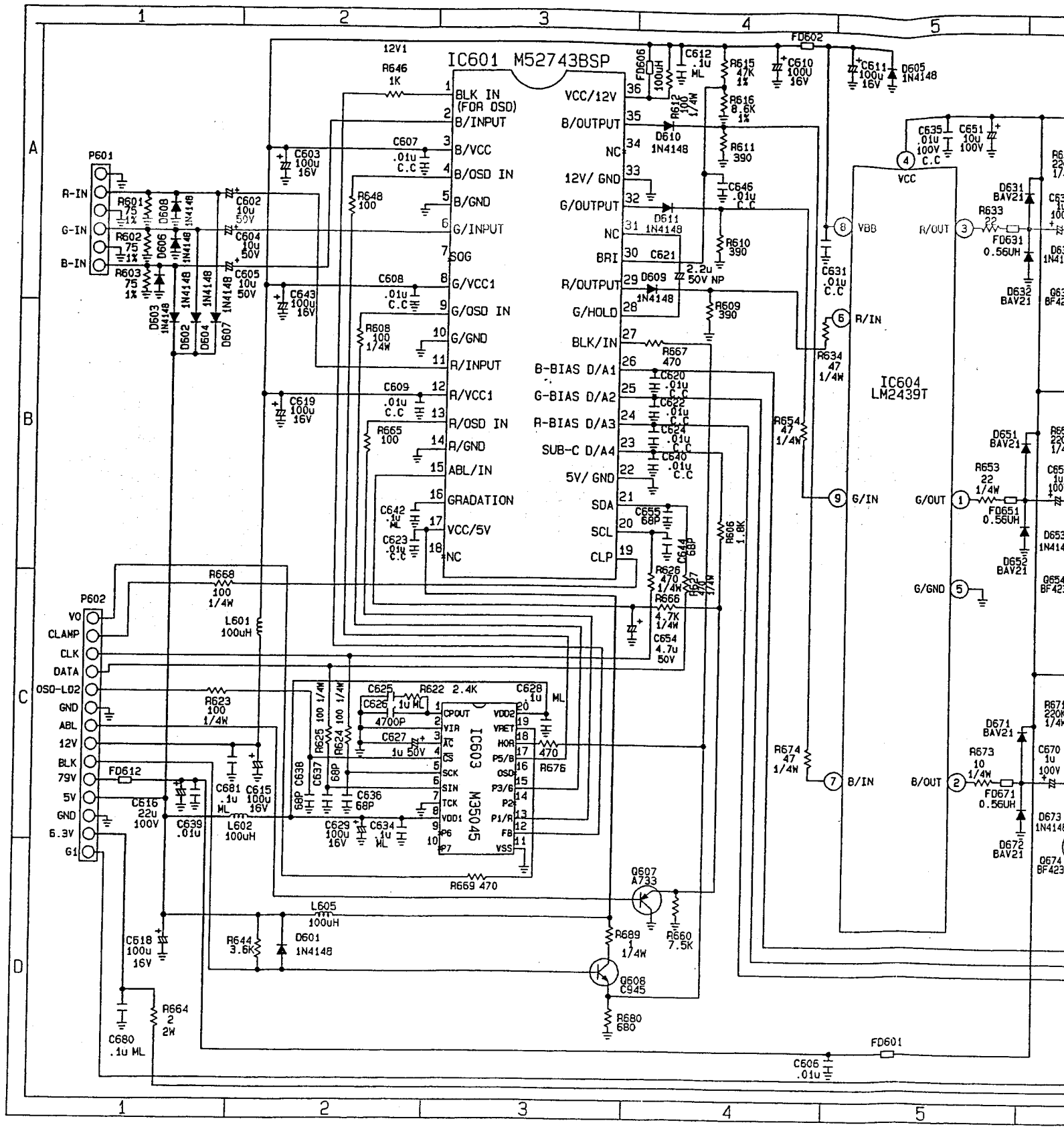
中強電子股份有限公司
研發一處發圖
90.11.20
繪圖：陳煤榮 REV
核准：

PR500F CRA



8W type.
cure value are 85c type.
60V type.

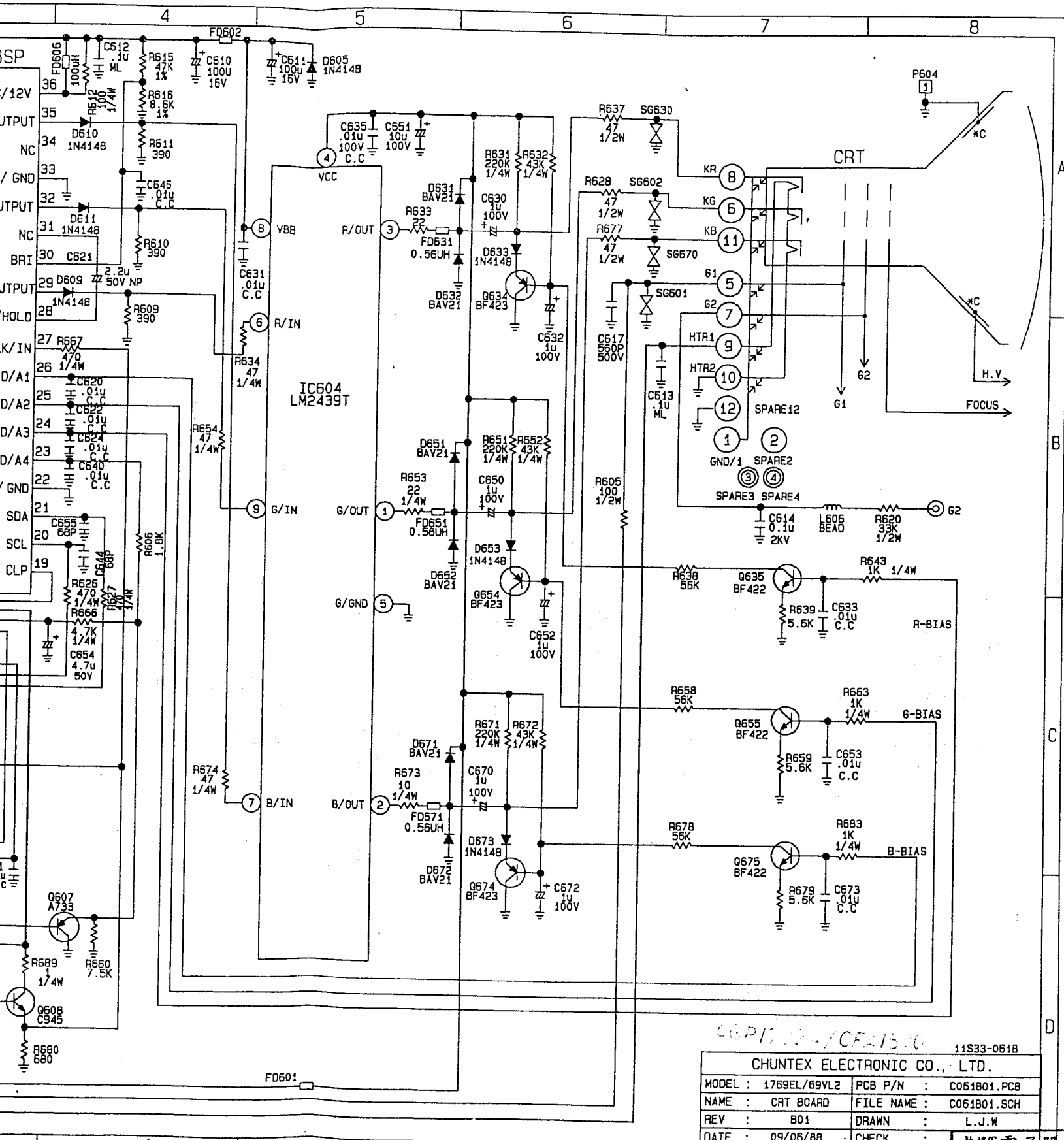
PR500F-CRA1570A



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

All capacitors not otherwise marked are 50V type.



pe.
alue are 85c type.
pe.

(EX700F)
CHP1772A
CNP1772A

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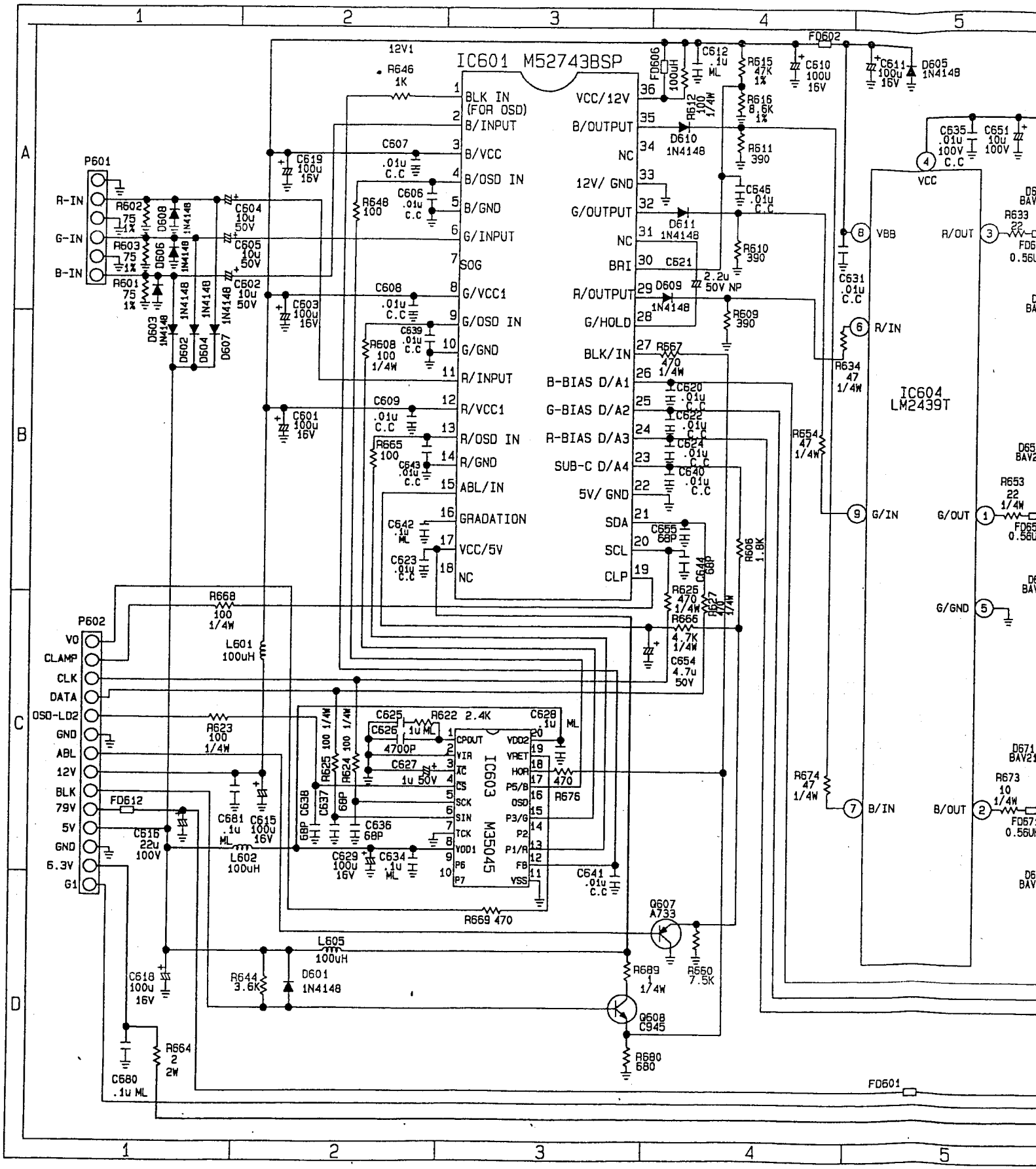
研發一處
90.11
繪圖：陳燦
核准：



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

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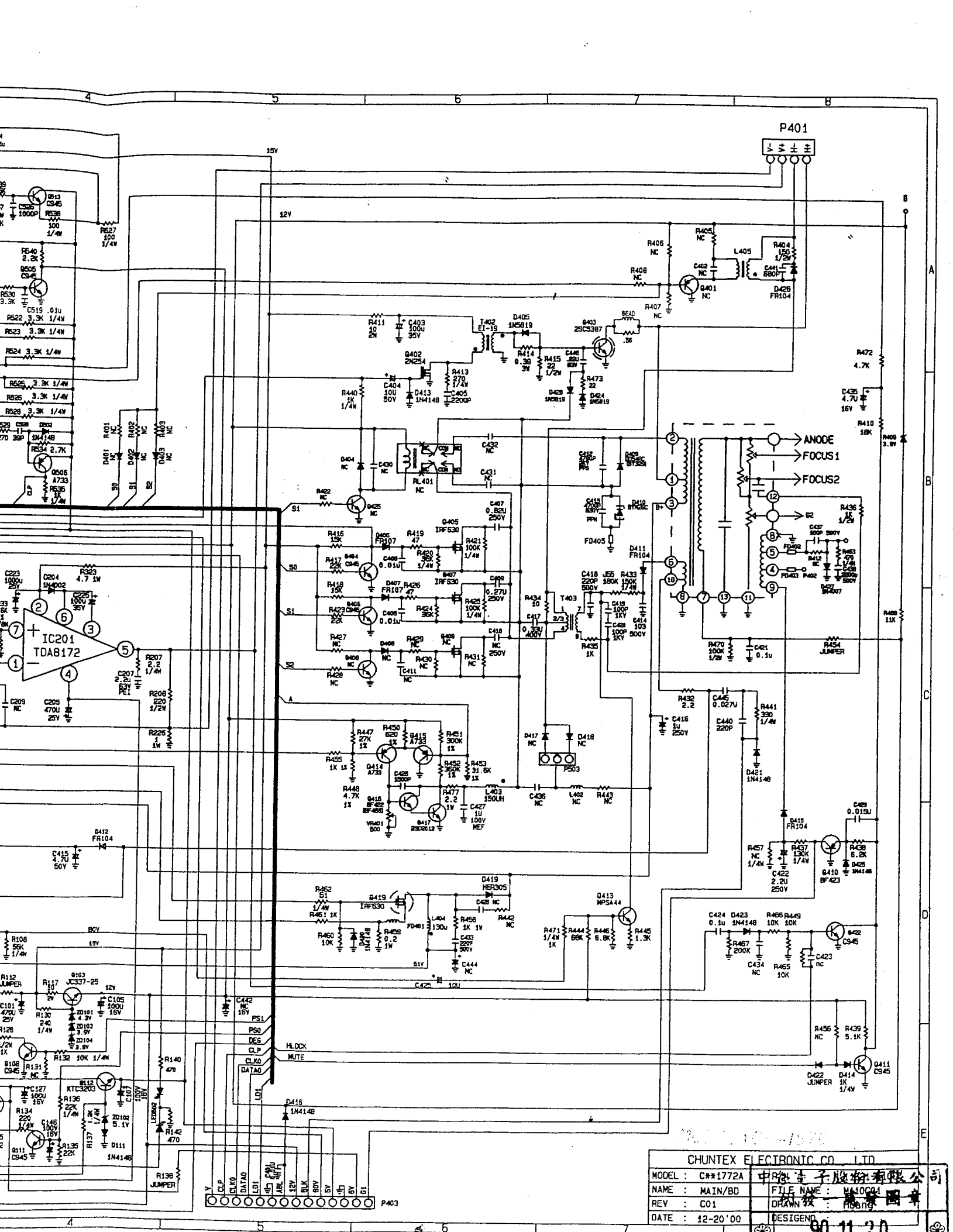
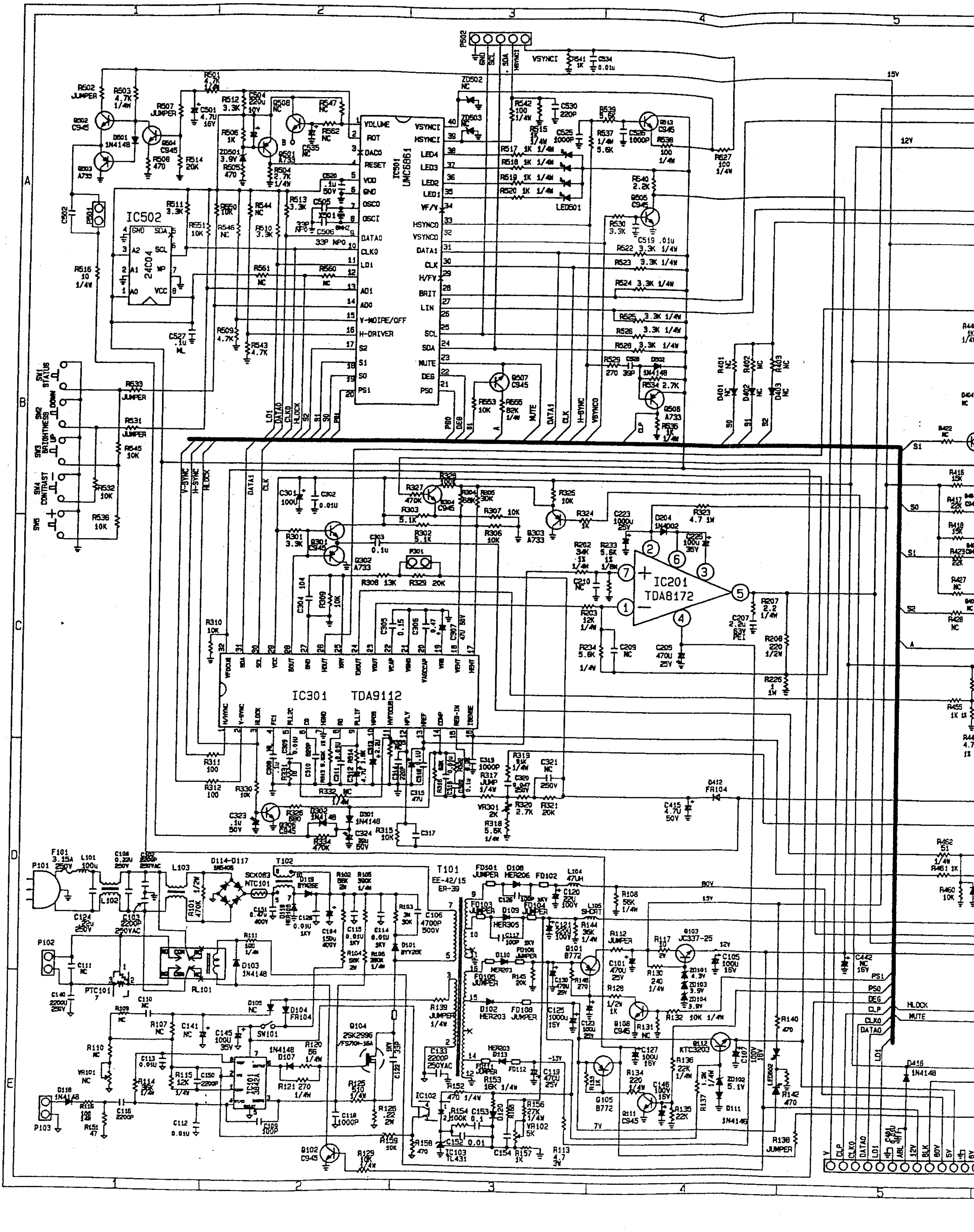
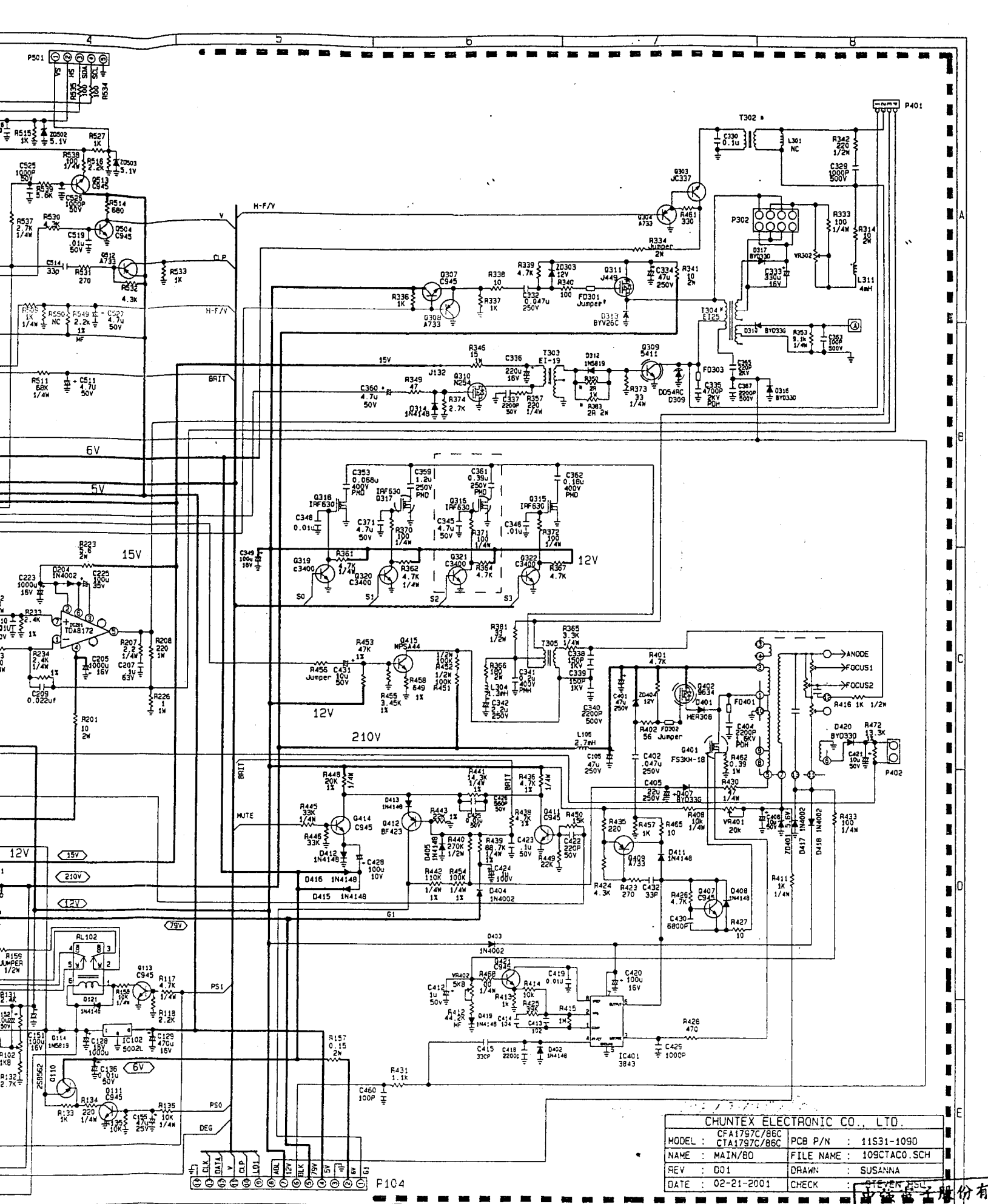

P401
ANODE
FOCUS1
FOCUS2
IC201
TDA8172
T402
EI-19
T403
RL401
P503
P403
CHUNTEX ELECTRONIC CO. LTD
MODEL : C**1772A
NAME : MAIN/BD
REV : C01
DATE : 12-20'00
FILE NAME : MA10C01
DRAWN : Huang
DESIGEND
90.11.20
CHP1772A / CNP1772A
(EX700F)

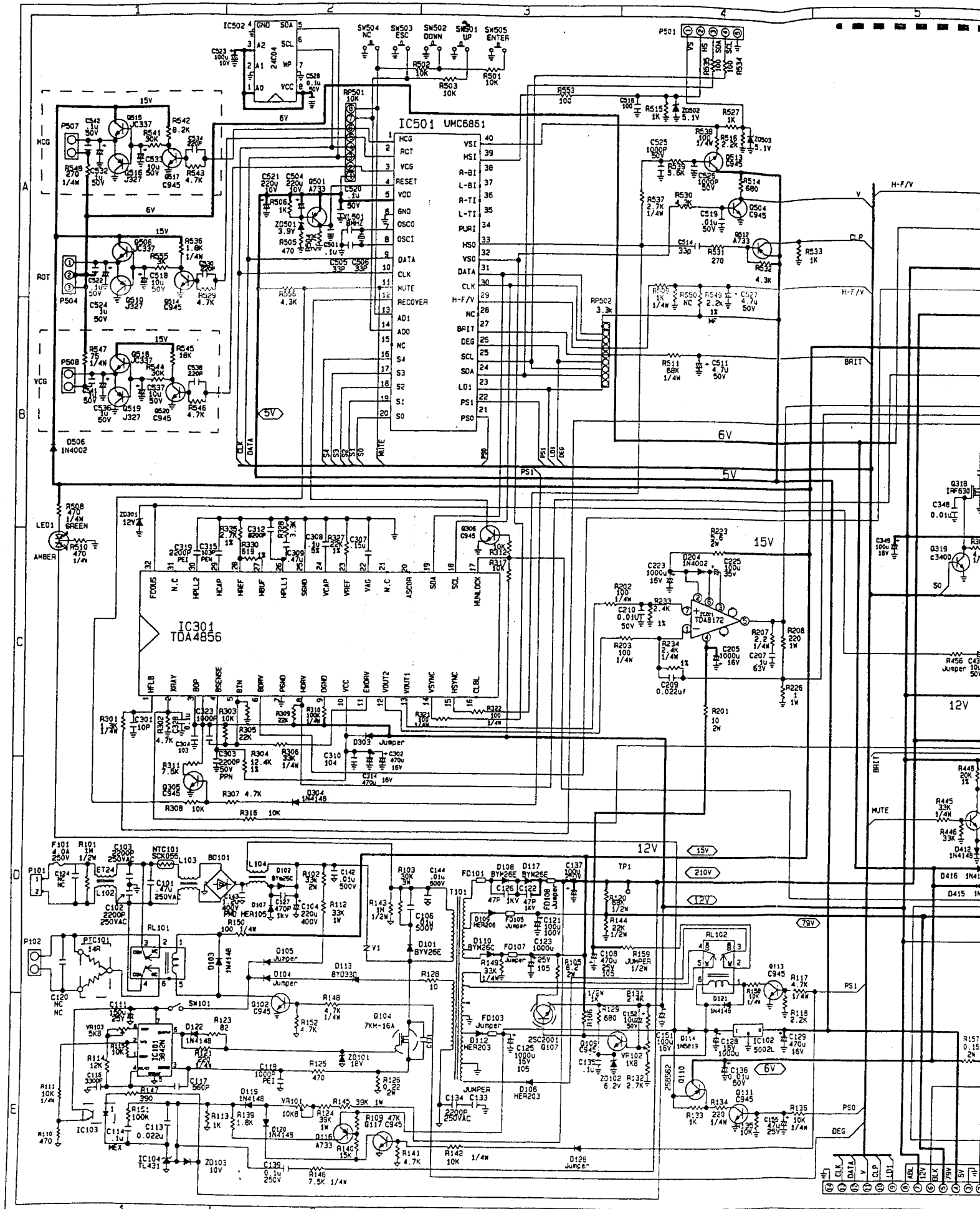


P502
VSYNCI
IC502
24C04
IC501
UMC5861
VOLUME
ROT
DAC0
RESET
VDD
GND
OSCO
OSCI
DATA0
CLK0
LD1
AD1
AD0
V-MOIRE/OFF
H-DRIVER
VSYNCI
HSYNCI
LED4
LED3
LED2
LED1
VF/V
HSYNC0
VSYNC0
DATA1
CLK
H/FV
BRIT
LIN
SCL
SDA
MUTE
DEG
PS0
LED501
SW1 STATUS
SW2 BRIGHTNESS DOWN
SW3 UP
SW4 CONTRAST
SW5
IC201
TDA8172
IC301
TDA9112
P301
P101
F101 3.15A 250V
T101
EE-42/15 ER-39
T102
NTC101
PTC101
RL101
SW101
IC101
IC102
IC103 TL431
Q104 2SK2996
P102
P103
80V
15V
12V
HLOCK
MUTE
PS1
PS0
DEG
CLP
CLK0
DATA0



* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

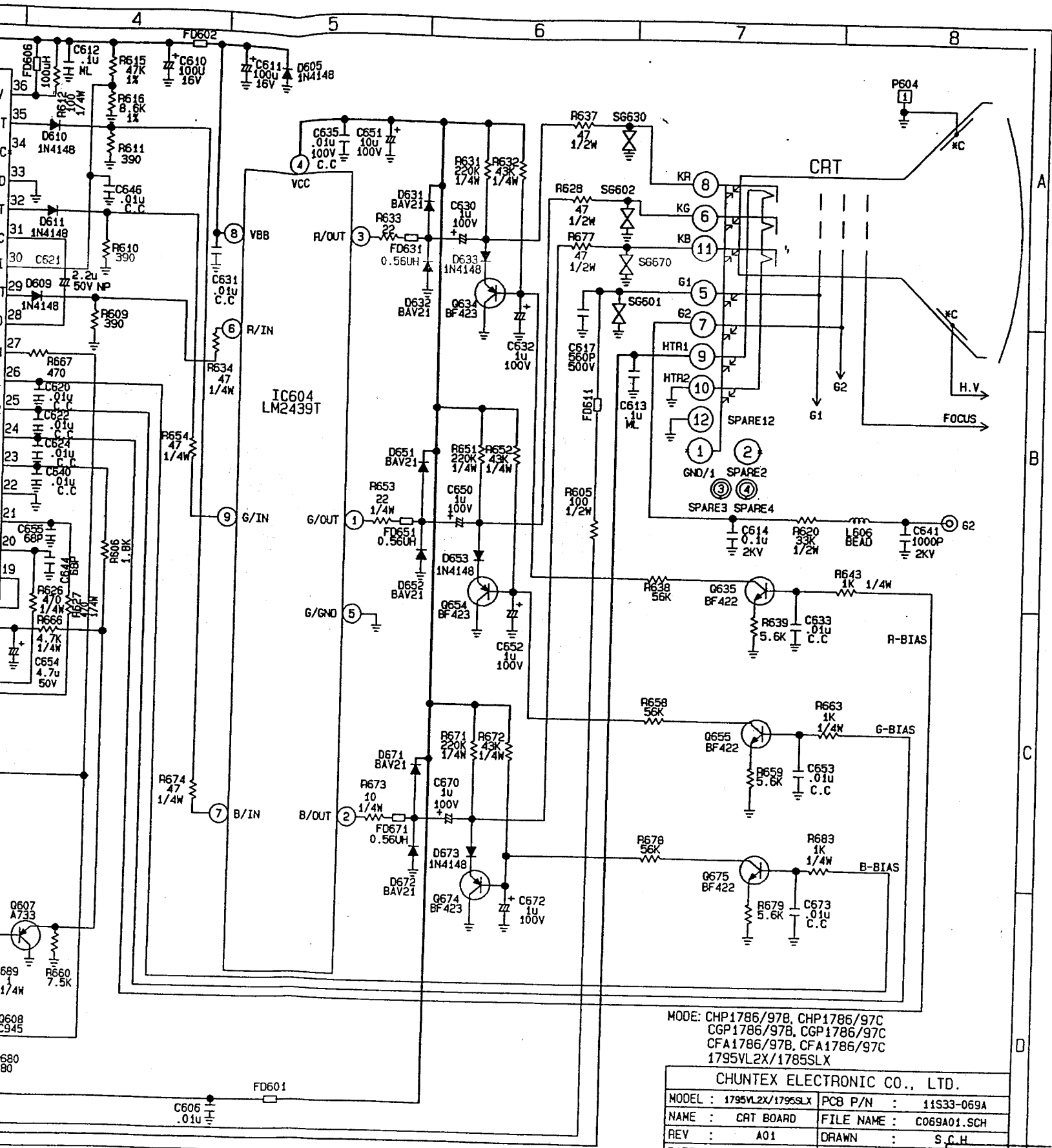
CHP1786C / CNP1786C (EX705F)



* MARKING ARE
* SOME COMPON

CH

EX705R CH



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

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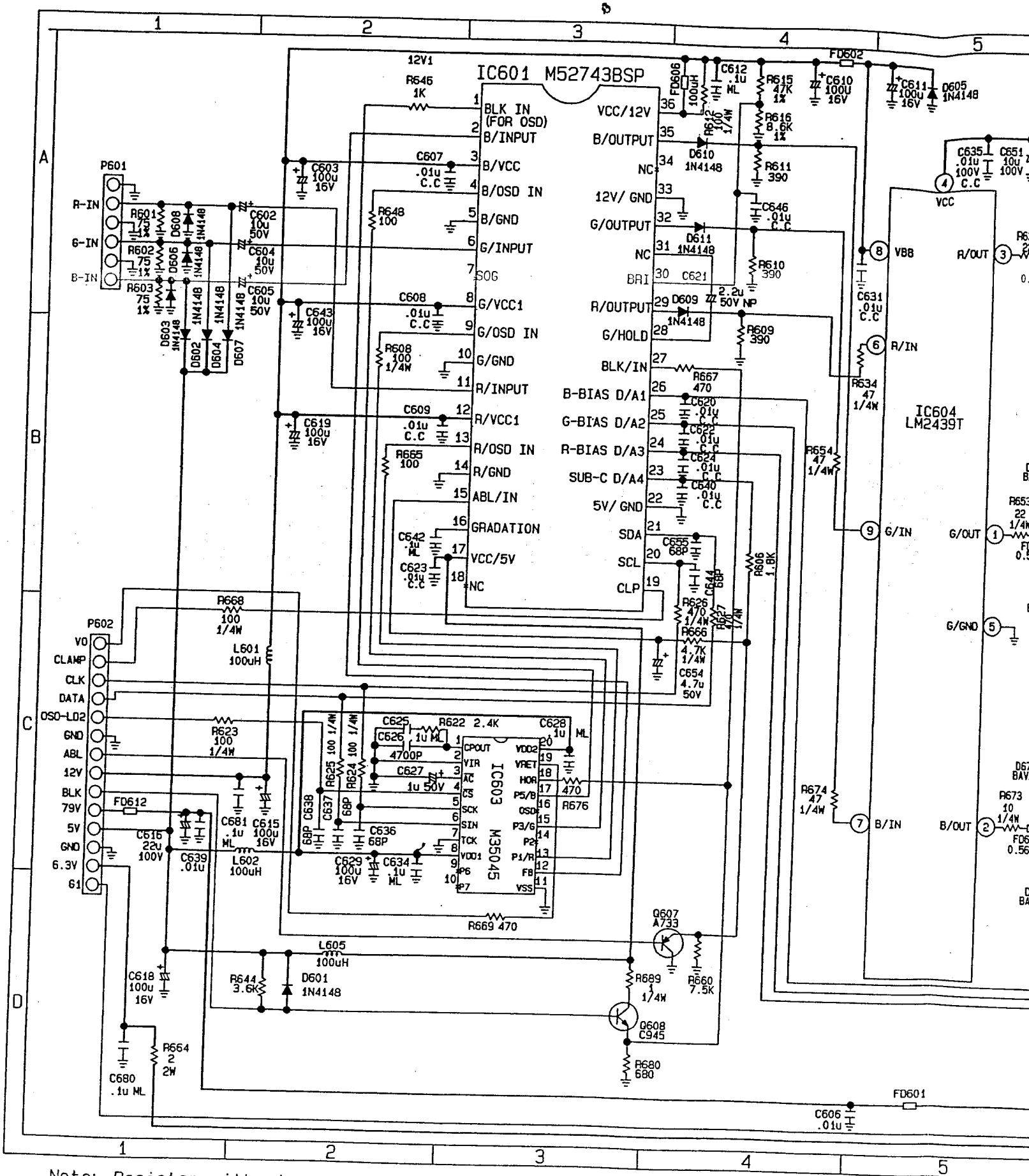
研發一處
90.11
繪圖:
核准:

e are 85c type.

CHP 1786/CHP 1786C
(EX 705F)



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

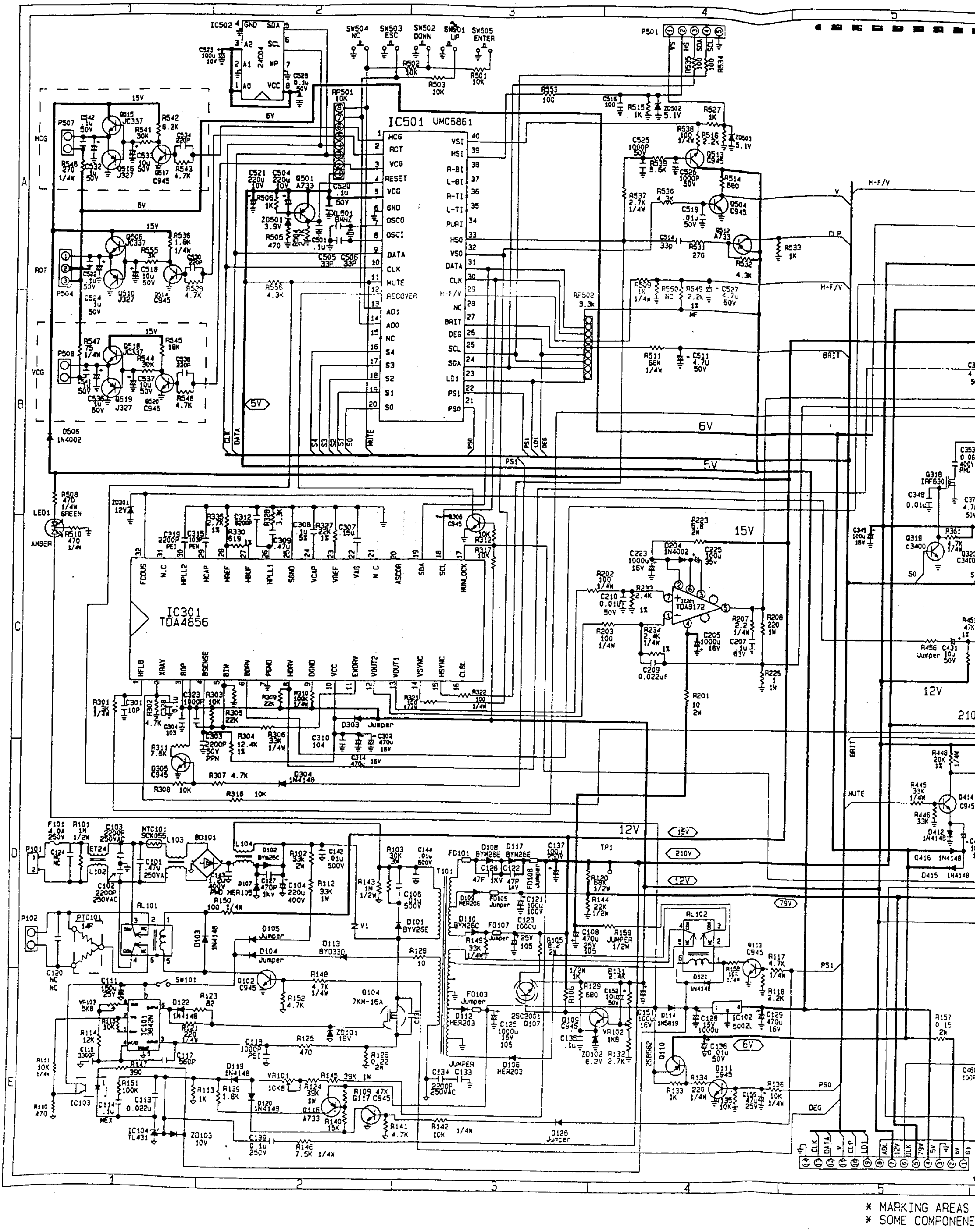
All capacitors not otherwise marked are 50V type.

CHUNTEX ELECTRONIC CO., LTD.			
MODEL :	CFA1797C/86C CTA1797C/86C	PCB P/N :	11S31-1090
NAME :	MAIN/BD	FILE NAME :	109CTAC0.SCH
REV :	001	DRAWN :	SUSANNA
DATE :	02-21-2001	CHECK :	STEVEN HSU

* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

CHP 1797C / CK2 1797 / CMP 1797
(CX710F)

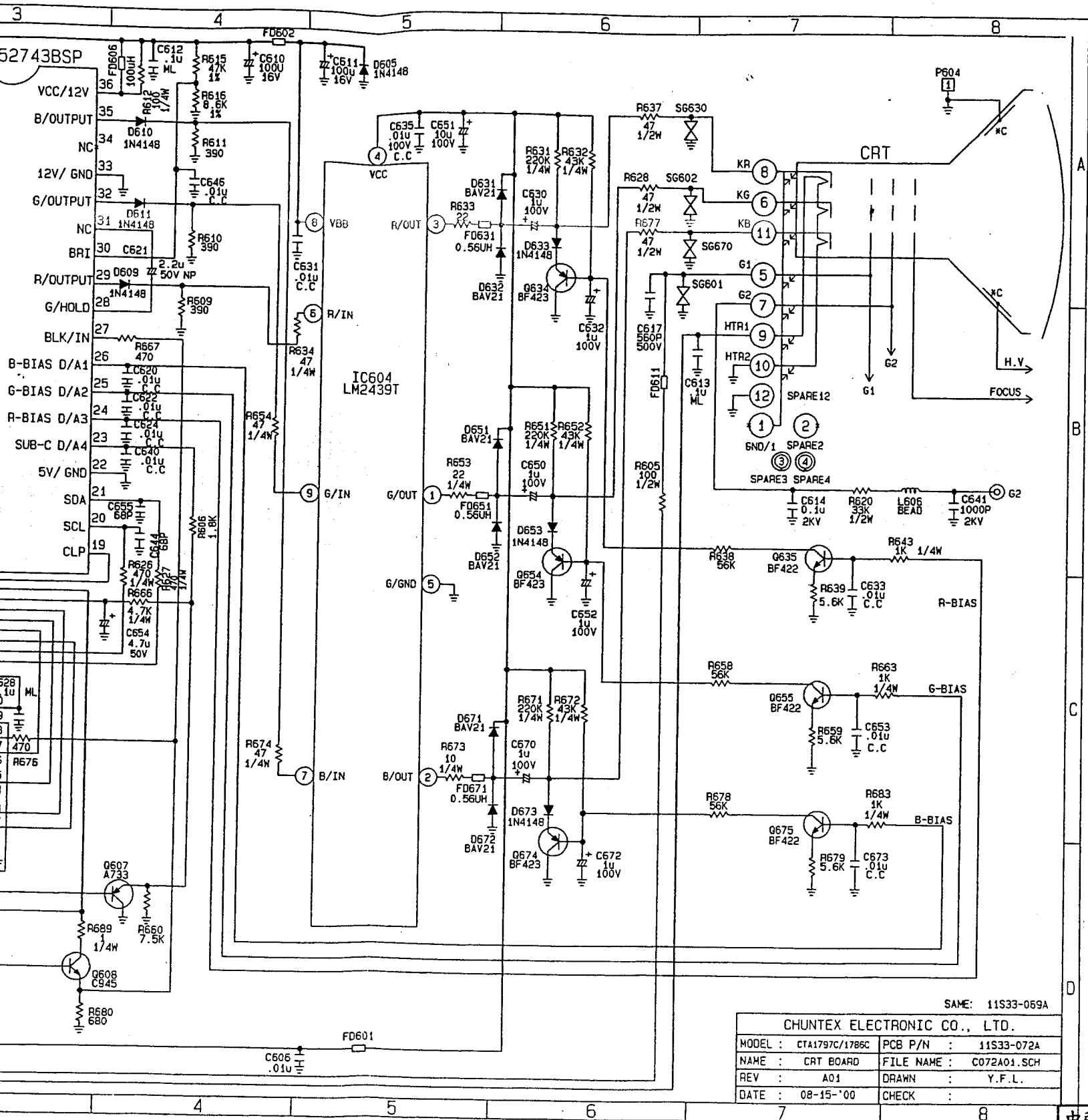
中強電子股份有限公司
研發一處發圖
90.11.20
繪圖：陳煤榮 REV
核准：



* MARKING AREAS

* SOME COMPONENE

PR500F CRA



8W type.
cure value are 85c type.
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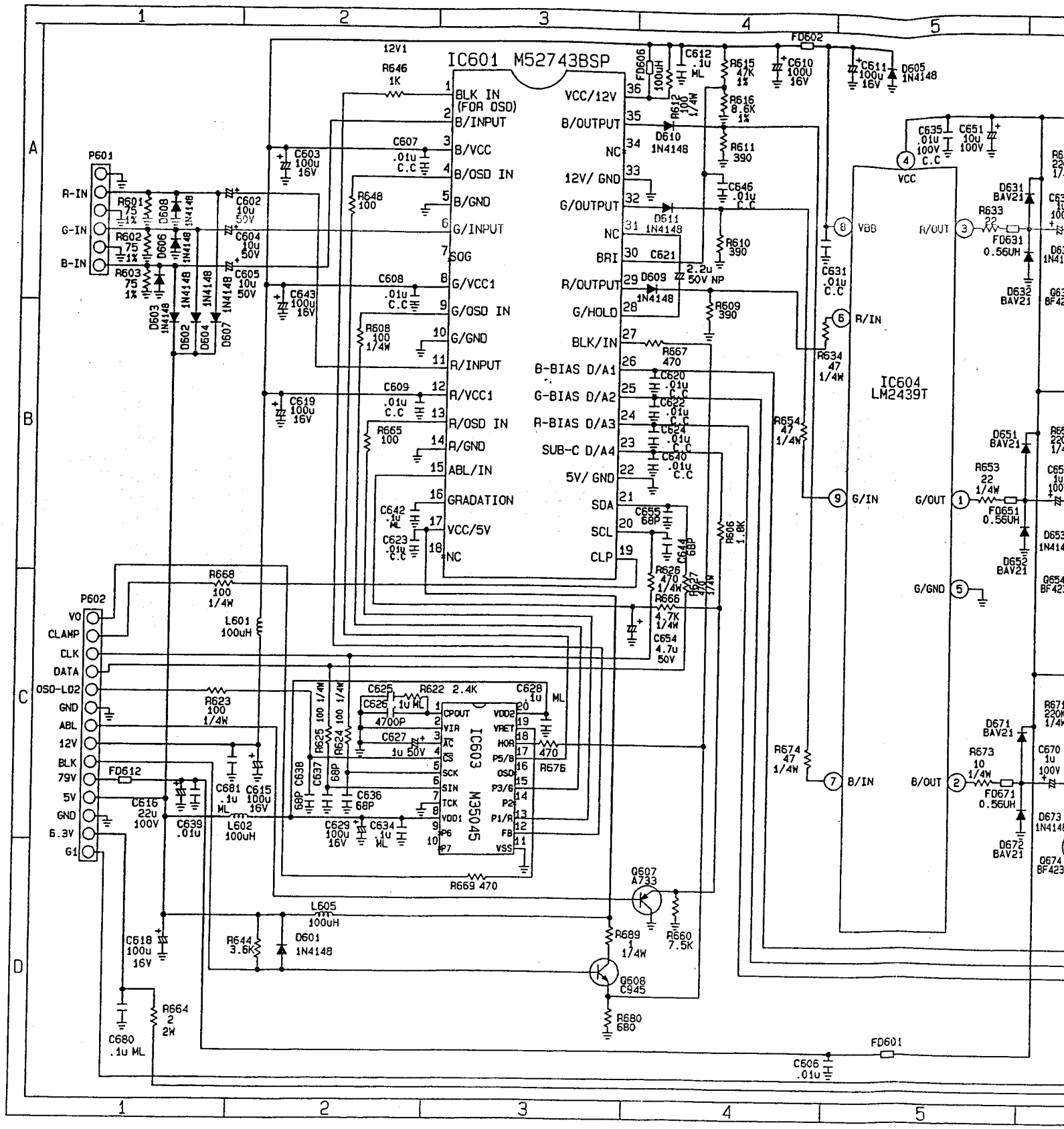
PR500F-CRA1570A



Note: Resistor without specified value are 1/8W type.

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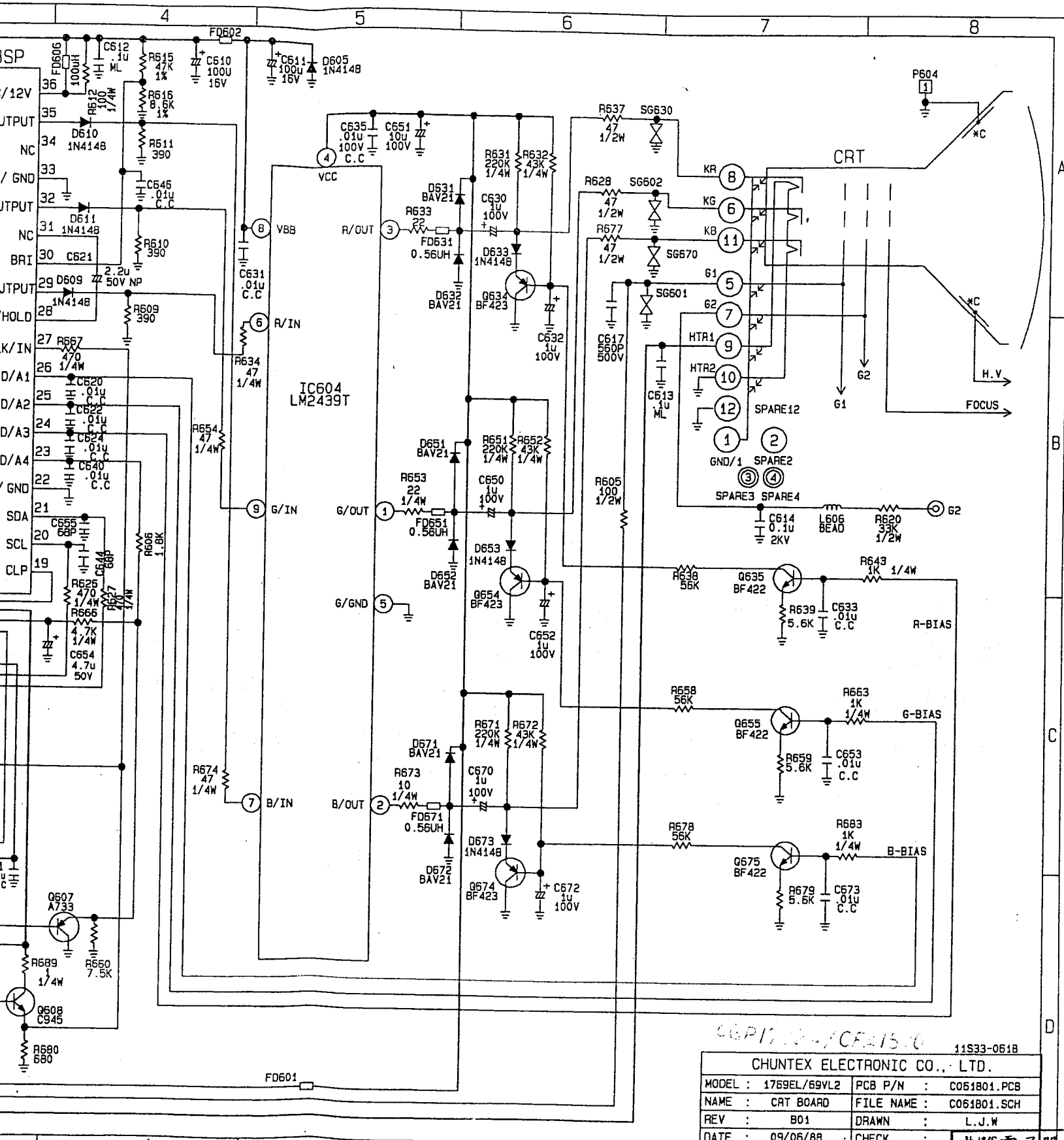
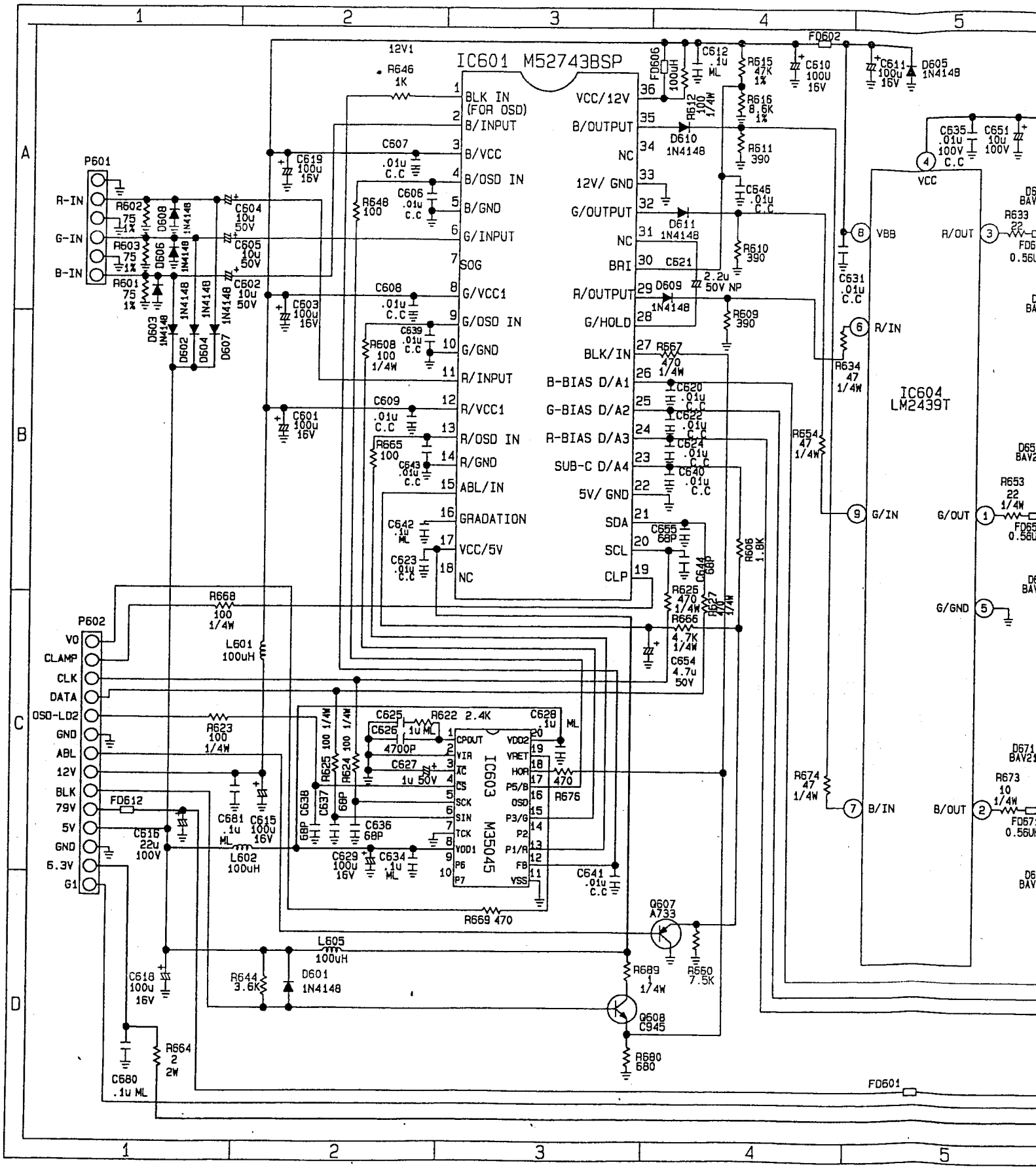


pe.
alue are 85c type.
pe.

(EX700F)
CHP1772A
CNP1772A

中強電子股
研發一處
90.11
繪圖：陳燦
核准：



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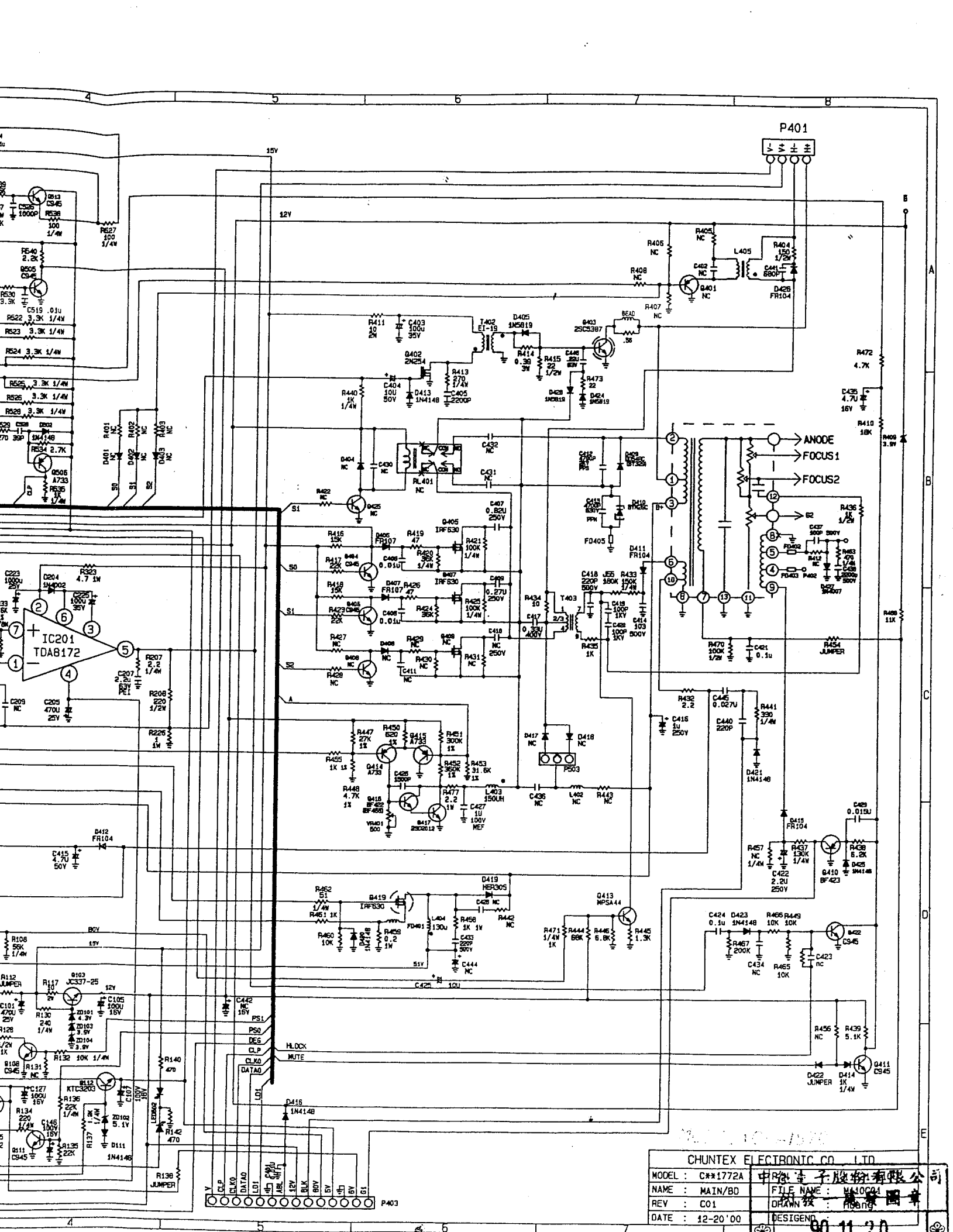
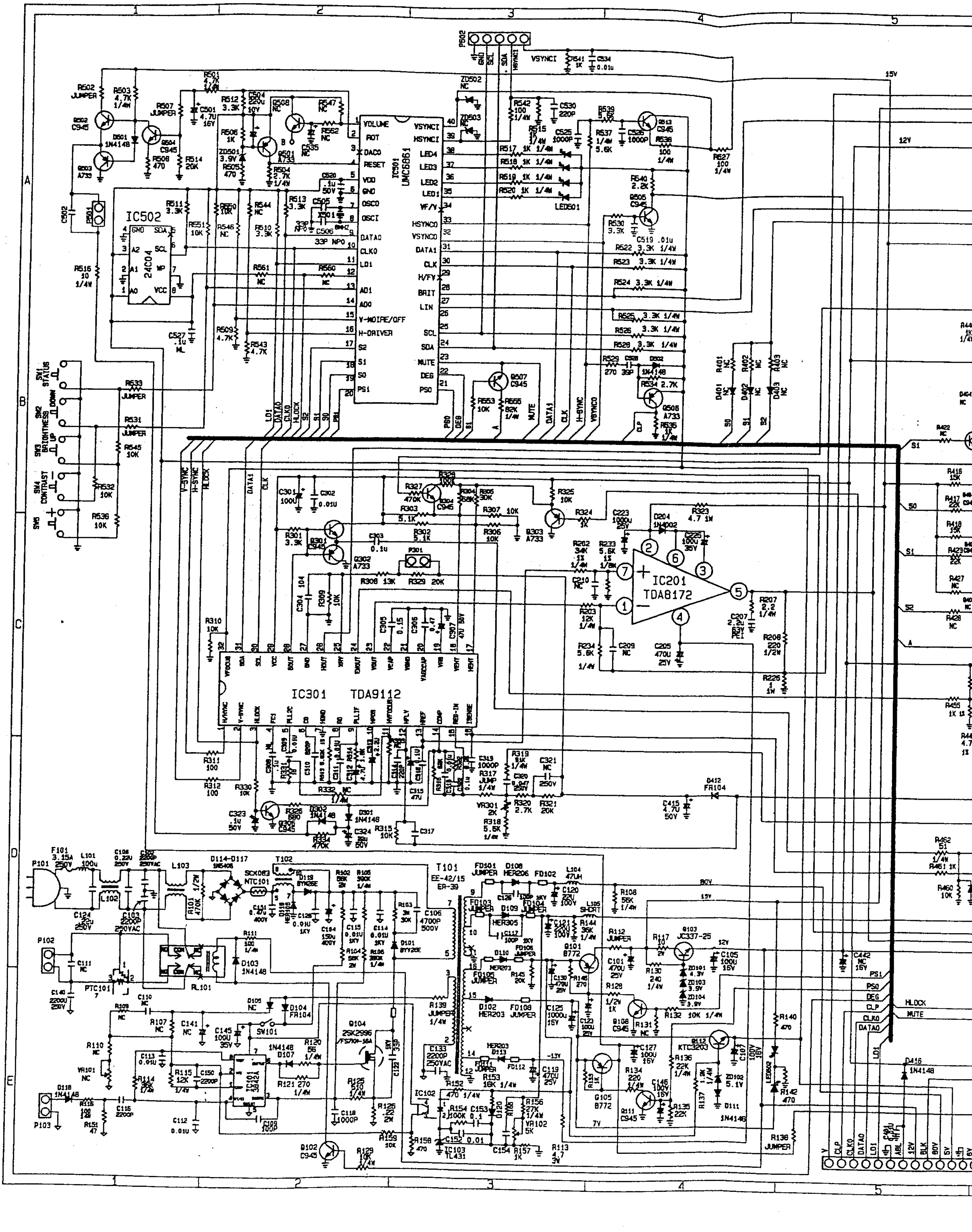
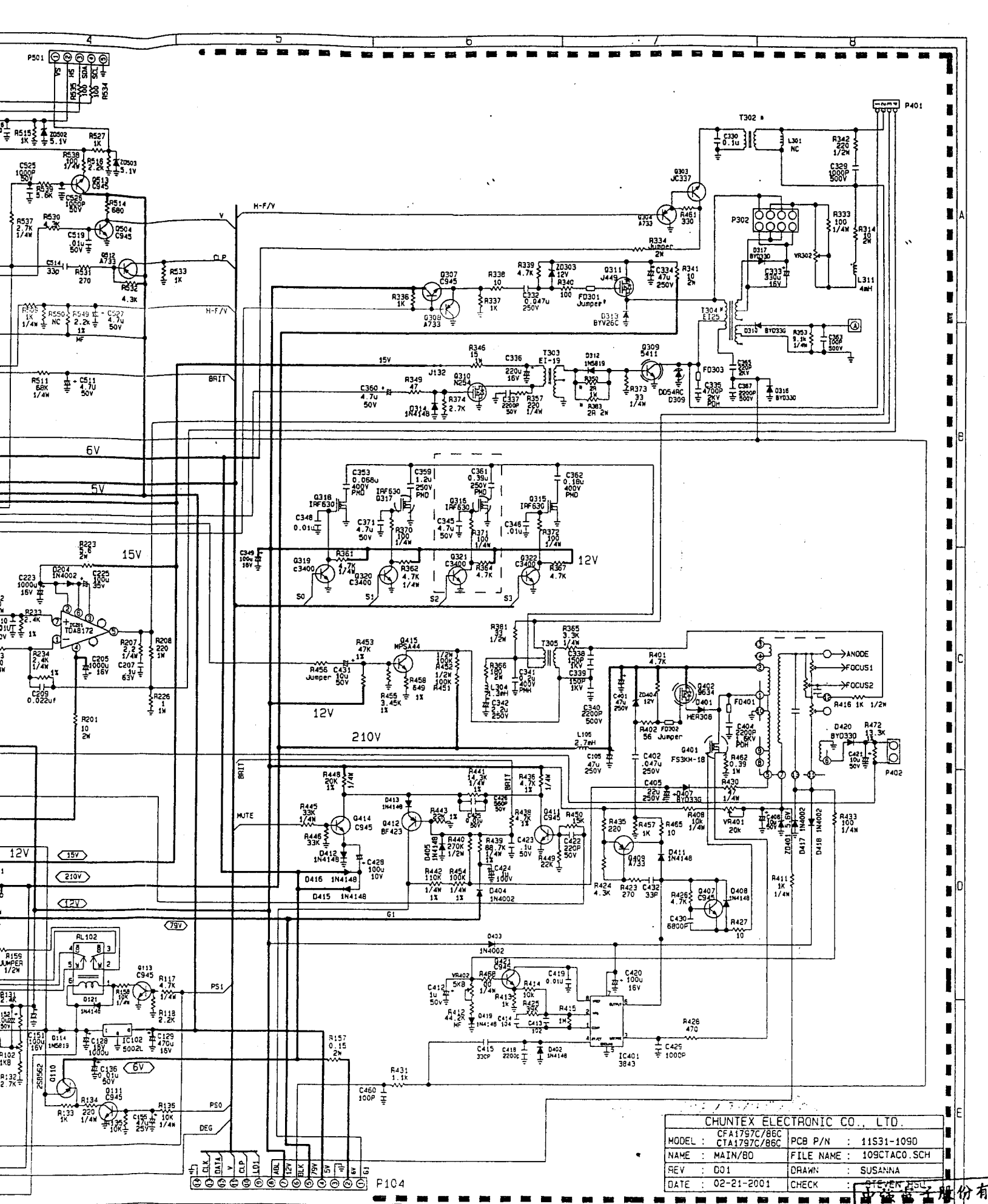

P401
ANODE
FOCUS1
FOCUS2
IC201
TDA8172
T402
EI-19
T403
RL401
P503
P403
CHUNTEX ELECTRONIC CO. LTD
MODEL : C**1772A
NAME : MAIN/BD
REV : C01
DATE : 12-20'00
FILE NAME : MA10C01
DRAWN : Huang
DESIGEND
90.11.20
CHP1772A / CNP1772A
(EX700F)

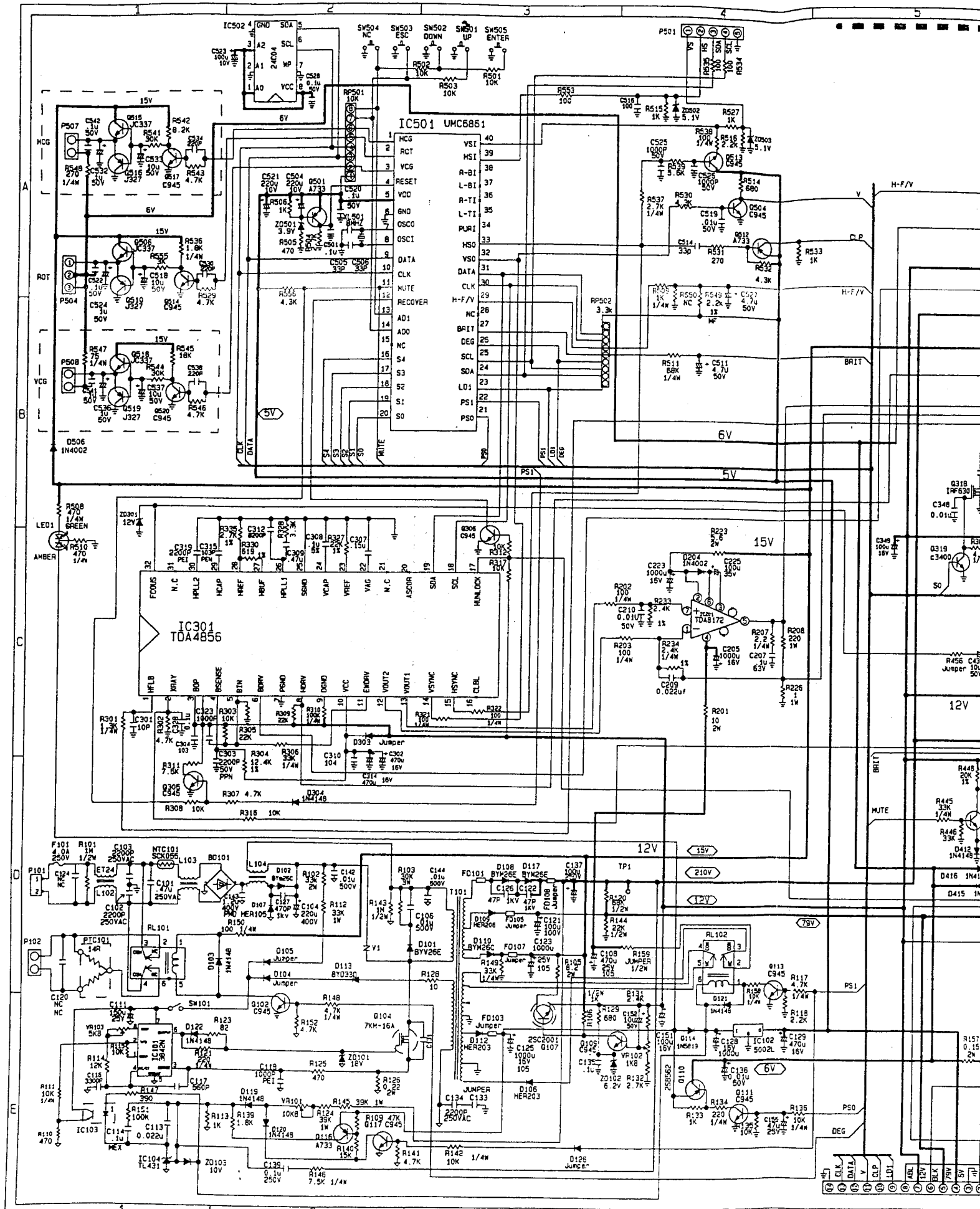


P502
VSYNCI
IC502
24C04
IC501
UMC5861
VOLUME
ROT
DACO
RESET
VDD
GND
OSCO
OSCI
DATAO
CLKO
LD1
AD1
AD0
V-MOIRE/OFF
H-DRIVER
S2
S1
S0
PS1
VSYNCI
HSYNCI
LED4
LED3
LED2
LED1
VF/Y
HSYNCO
VSYNCO
DATA1
CLK
H/FV
BRIT
LIN
SCL
SDA
MUTE
DEG
PS0
LED501
SW1 STATUS
SW2 BRIGHTNESS DOWN
SW3 BRIGHTNESS UP
SW4 CONTRAST
SW5
IC201
TDA8172
IC301
TDA9112
P301
T101
EE-42/15
ER-39
T102
F101
3.15A
250V
P101
P102
P103
PTC101
RL101
IC101
3842A
Q104
2SK2996
IC102
IC103
TL431
SW101
NTC101
15V
12V
80V
HLOCK
MUTE
PS1
PS0
DEG
CLP
CLKO
DATAO



* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

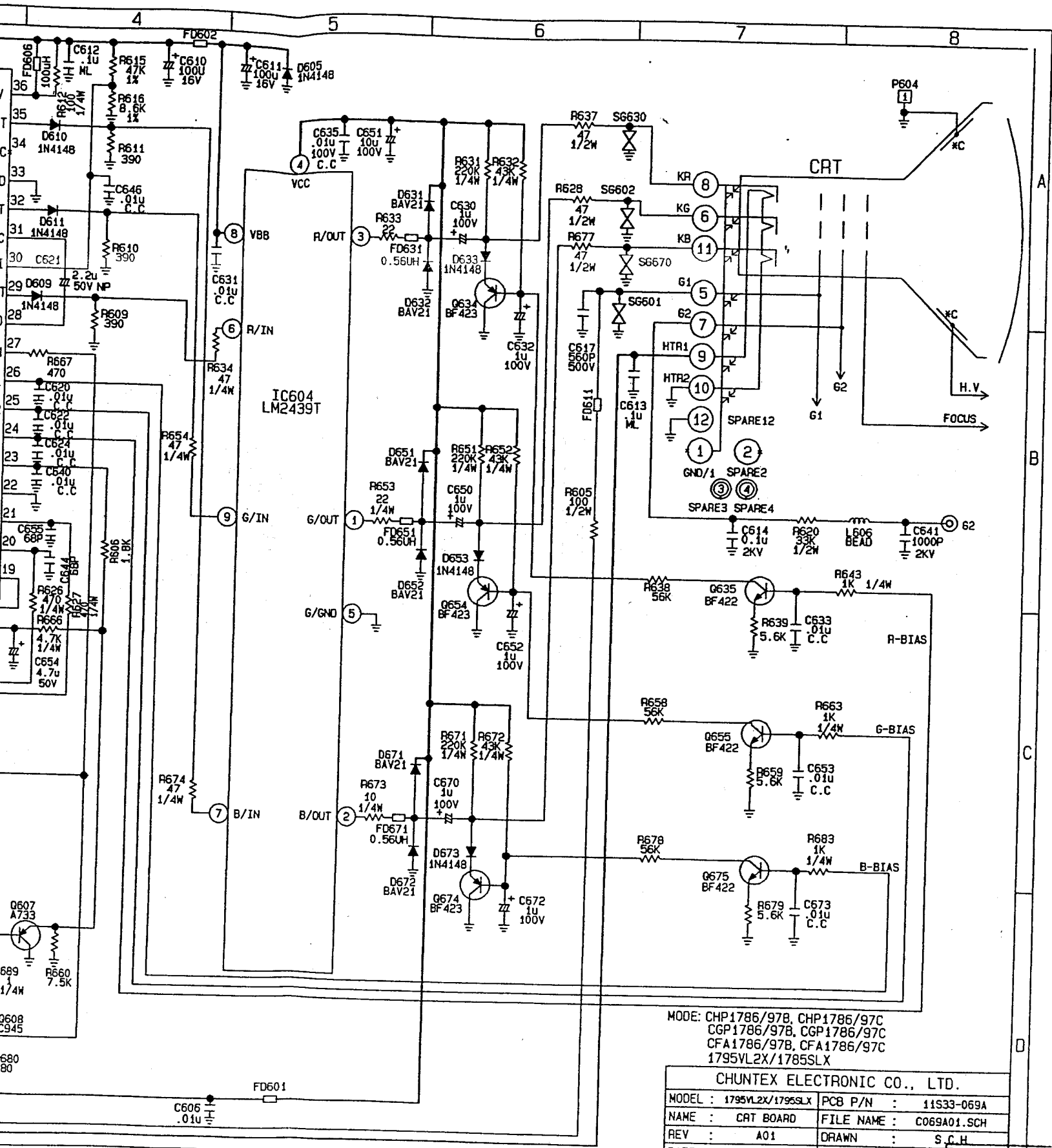
CHP1786C / CNP1786C (EX705F)



* MARKING ARE
* SOME COMPON

CH

EX705R CH



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

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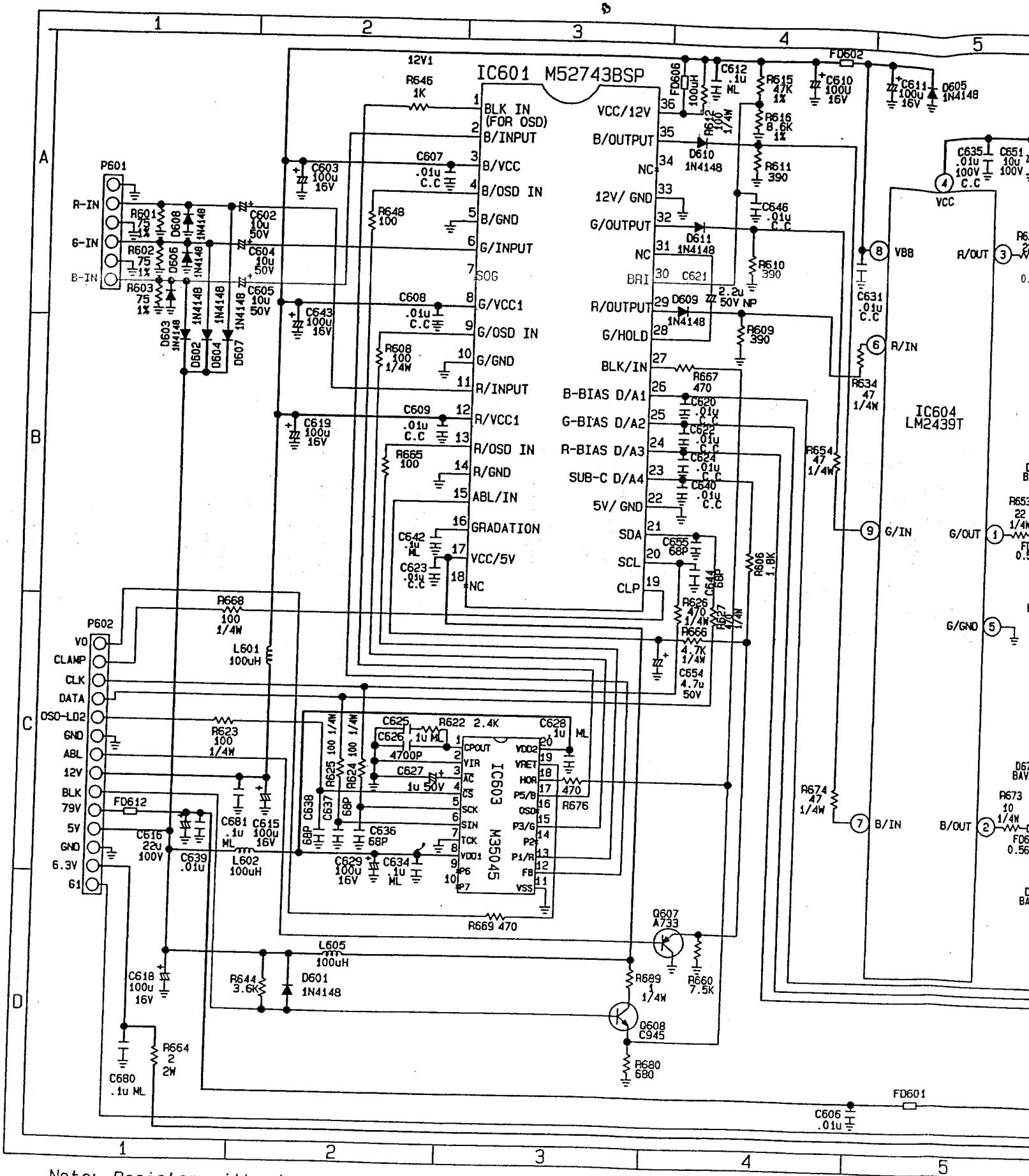
研發一處
90.11
繪圖:
核准:

e are 85c type.

CHP 1786/CHP 1786C
(EX 705F)



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

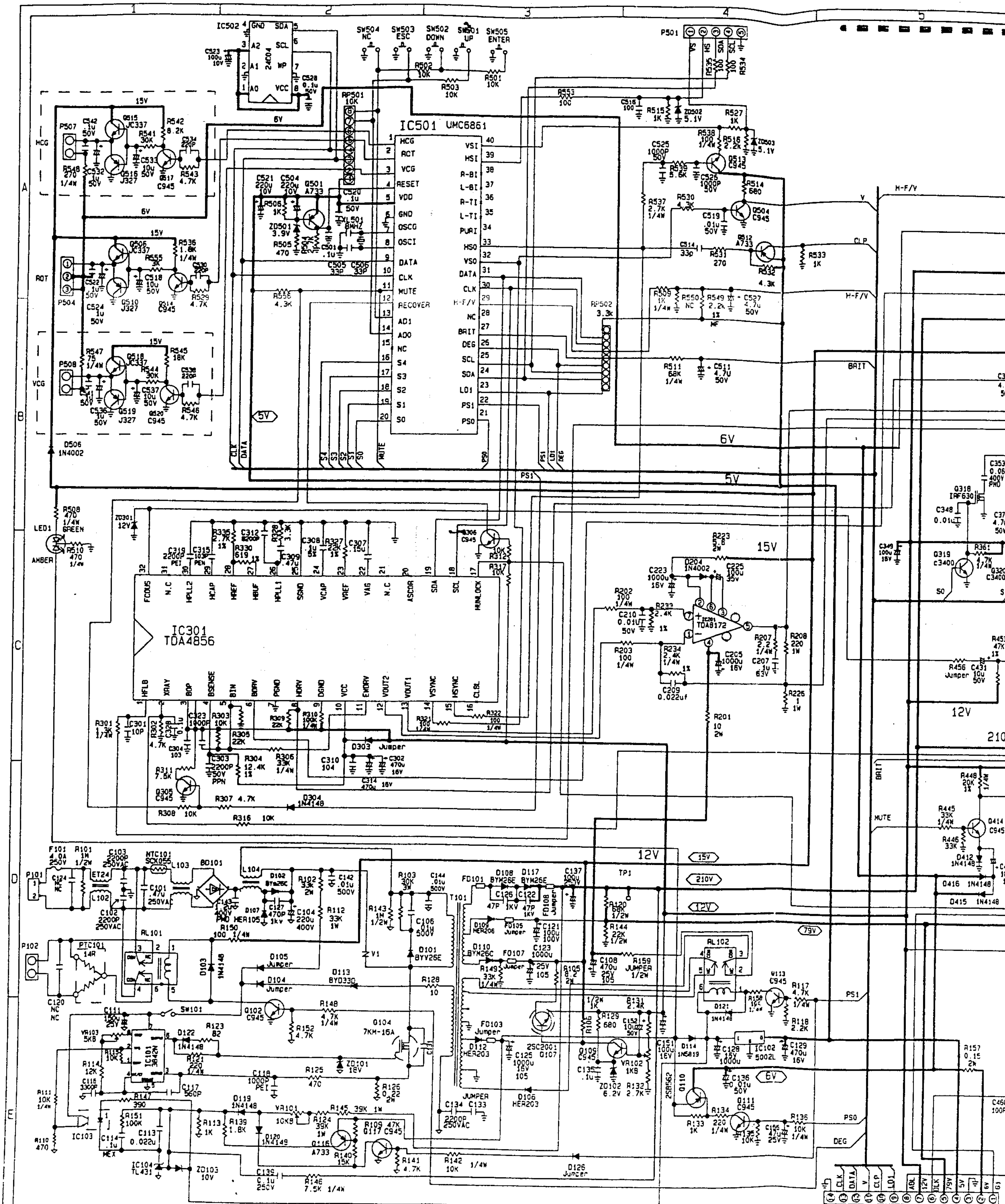
All capacitors not otherwise marked are 50V type.

CHUNTEX ELECTRONIC CO., LTD.			
MODEL :	CFA1797C/86C CTA1797C/86C	PCB P/N :	11S31-1090
NAME :	MAIN/BD	FILE NAME :	109CTAC0.SCH
REV :	001	DRAWN :	SUSANNA
DATE :	02-21-2001	CHECK :	STEVEN HSU

* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

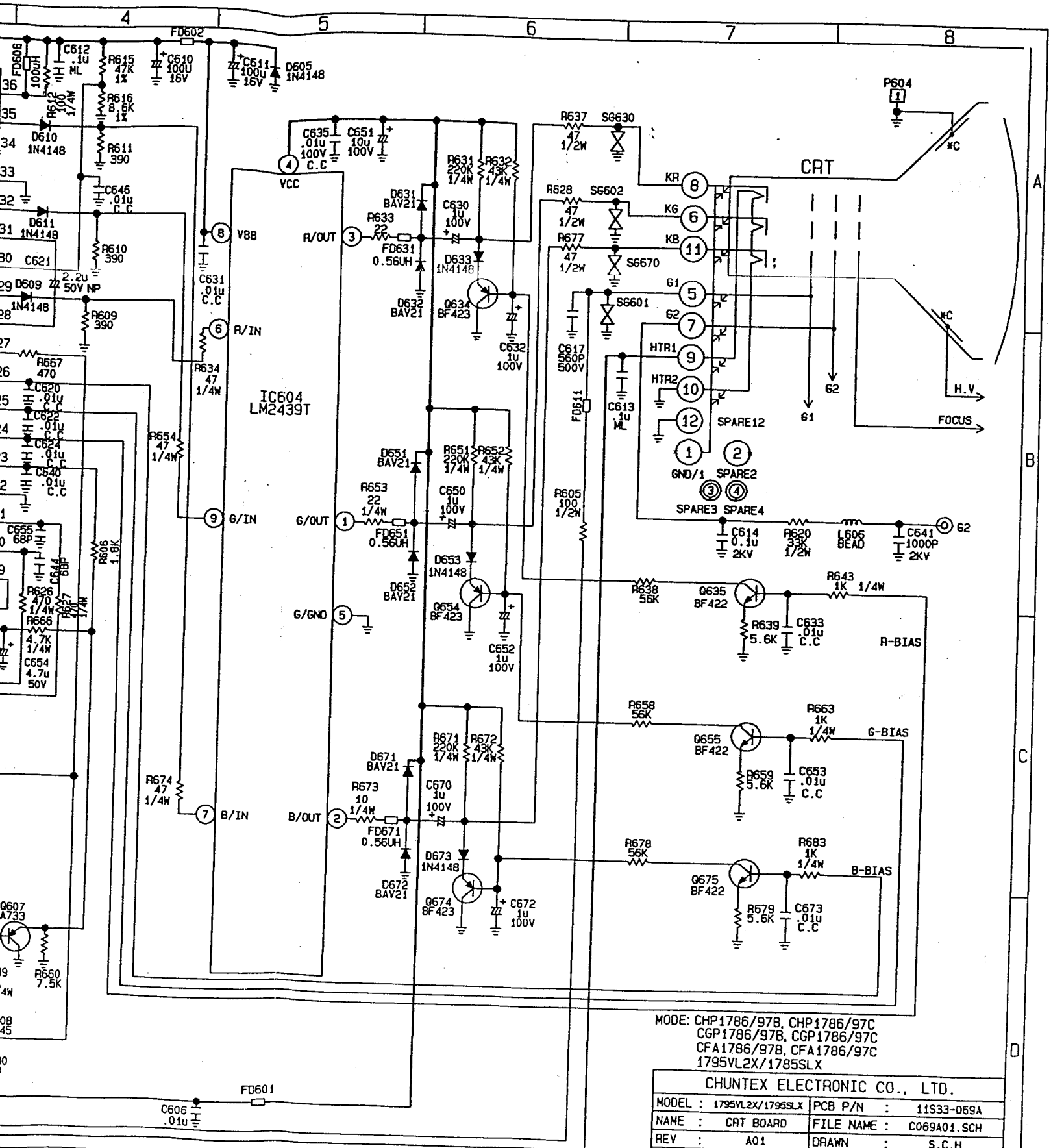
CHP 1797C / CK2 1797 / CMP 1797
(CX710F)

中強電子股份有限公司
研發一處發圖
90.11.20
繪圖：陳煤榮 REV
核准：



* MARKING AREAS
* SOME COMPONENE

EX 710F CHP



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

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研發一處
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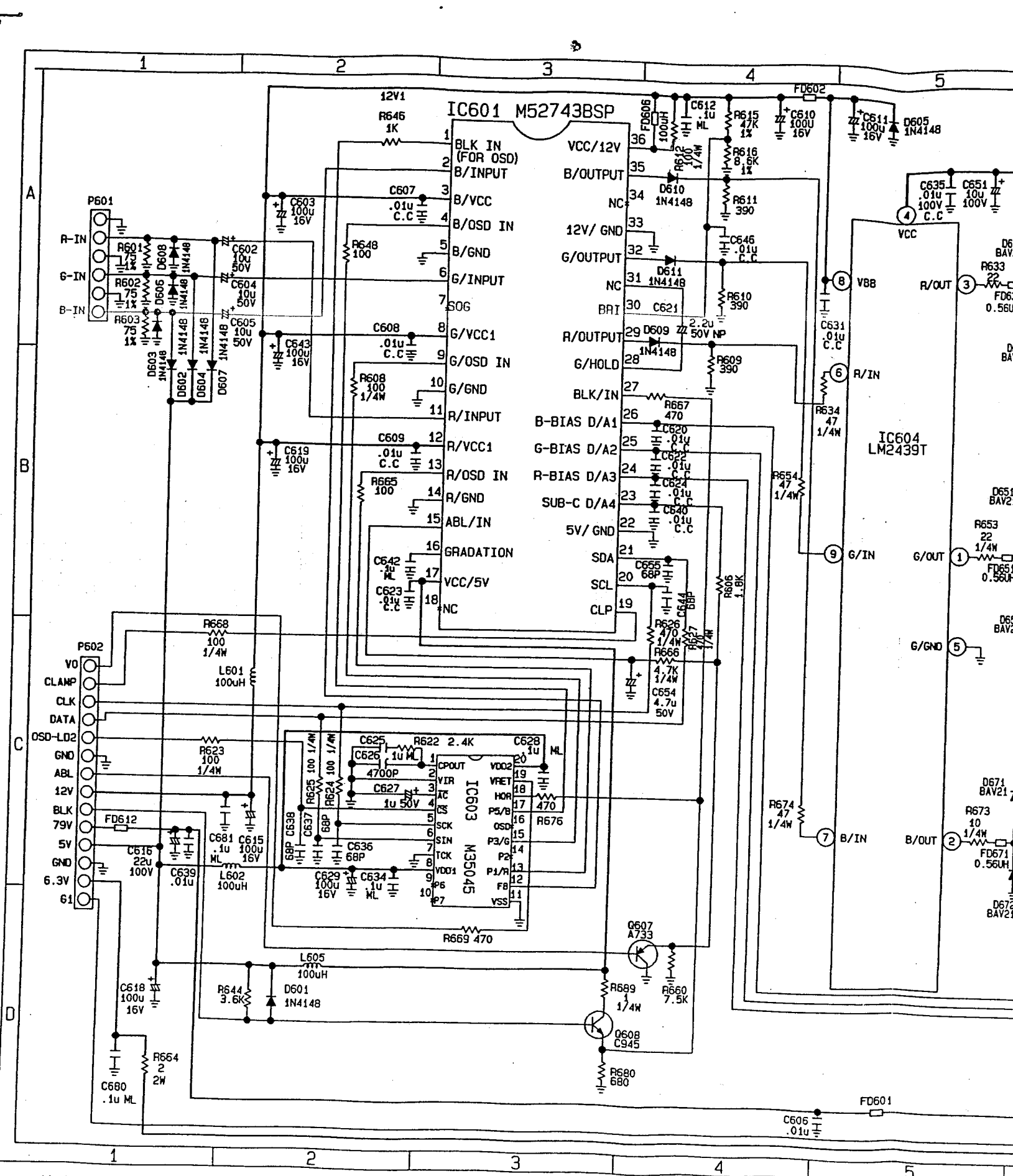
繪圖:
核准: 陳榮榮

are 85c type.

CHP 1797C/CK21797C/CNP1797
(EX710F)

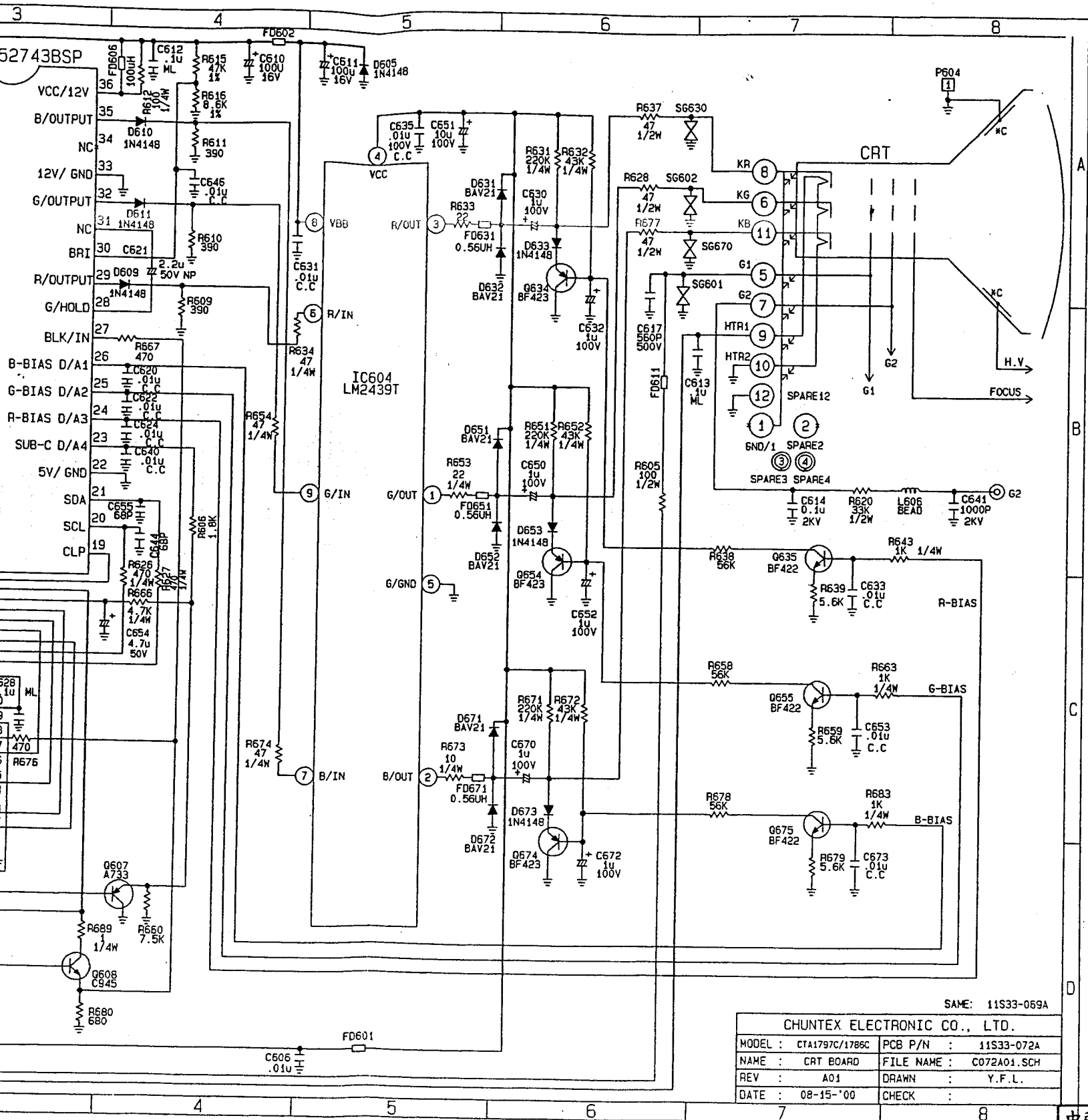


Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

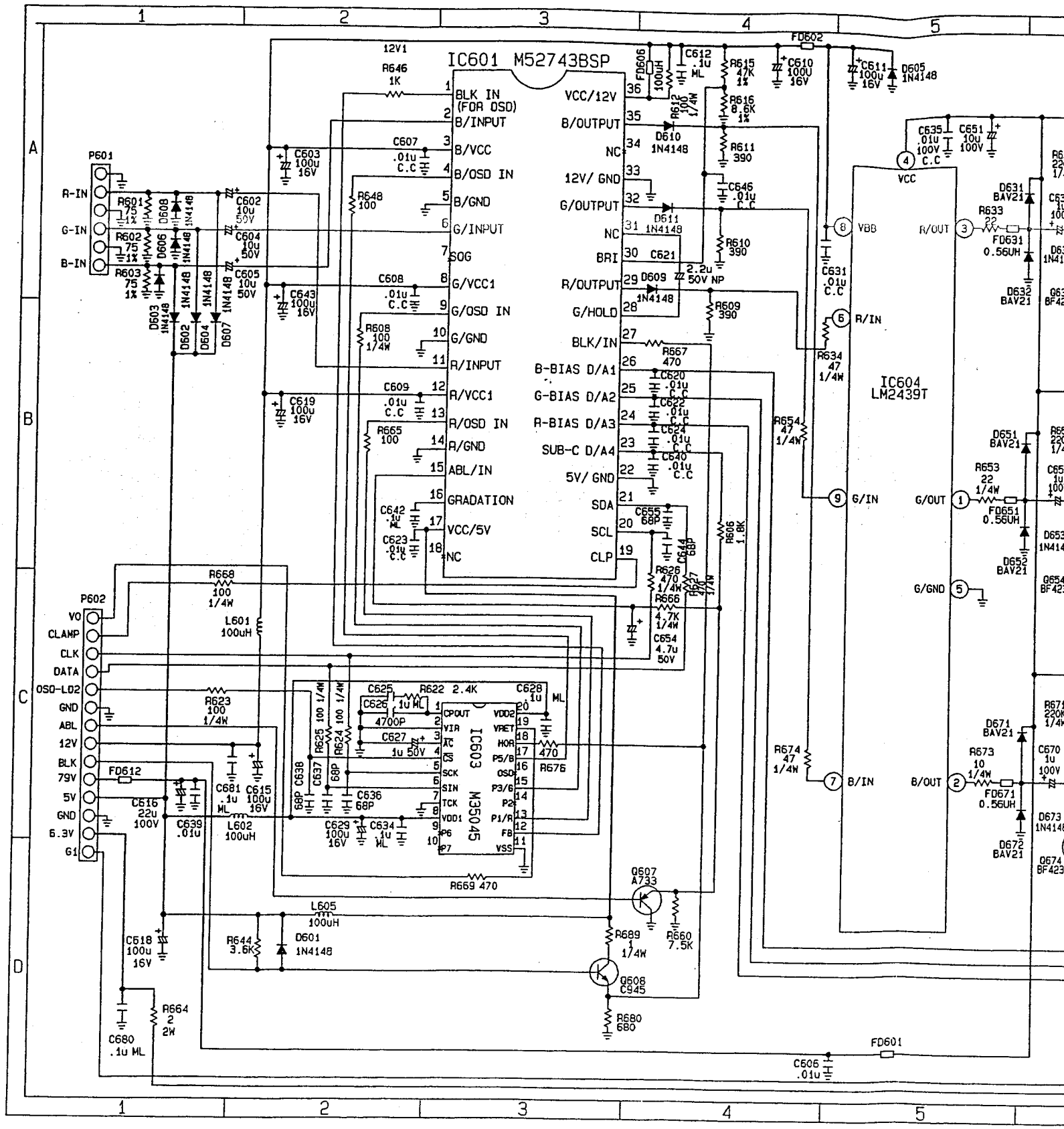
All capacitors not otherwise marked are 50V type.

PR500F CRA



8W type.
cure value are 85c type.
60V type.

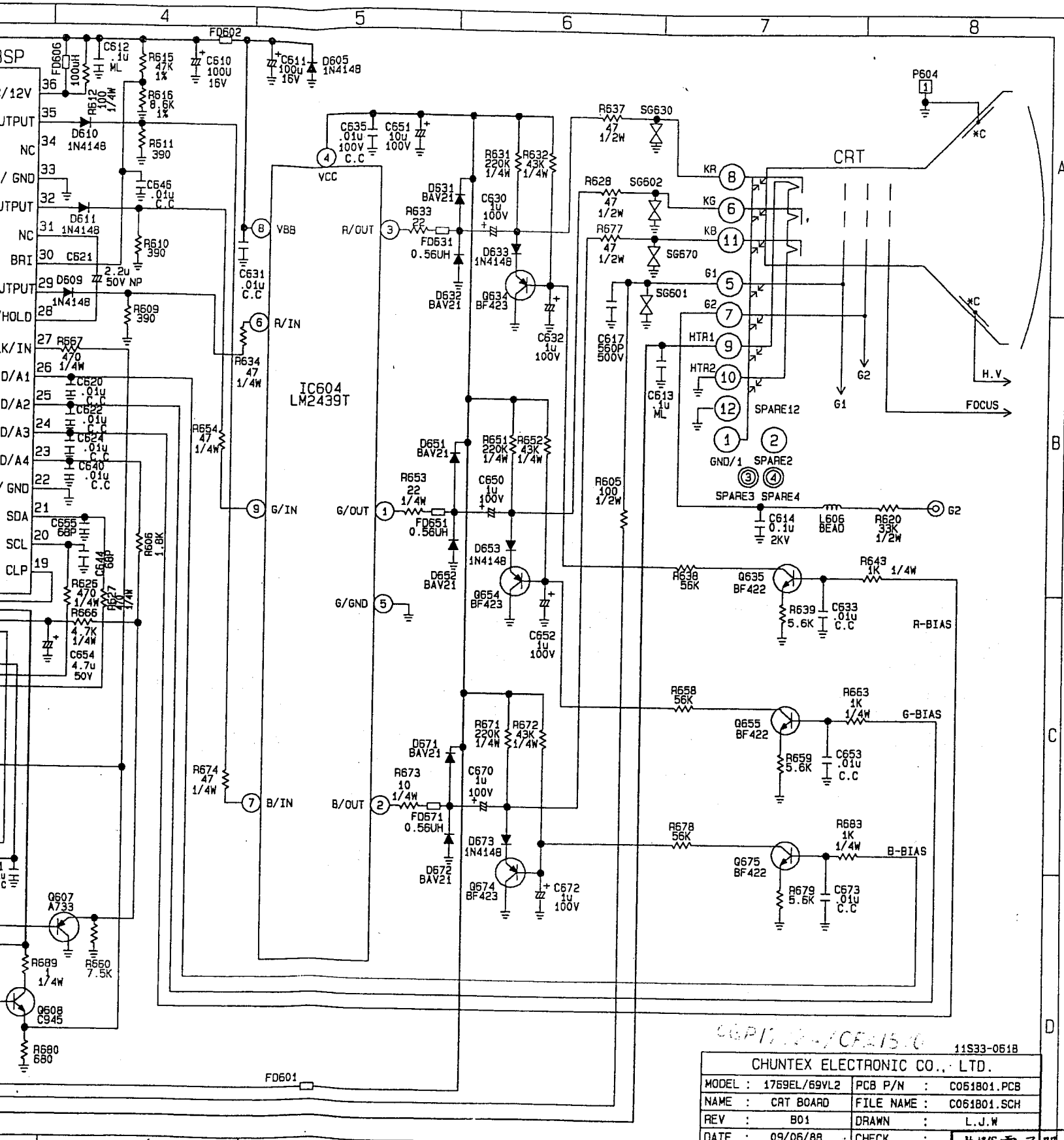
PR500F-CRA1570A



Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

All capacitors not otherwise marked are 50V type.



pe.
alue are 85c type.
pe.

(EX700F)
CHP1772A
CNP1772A

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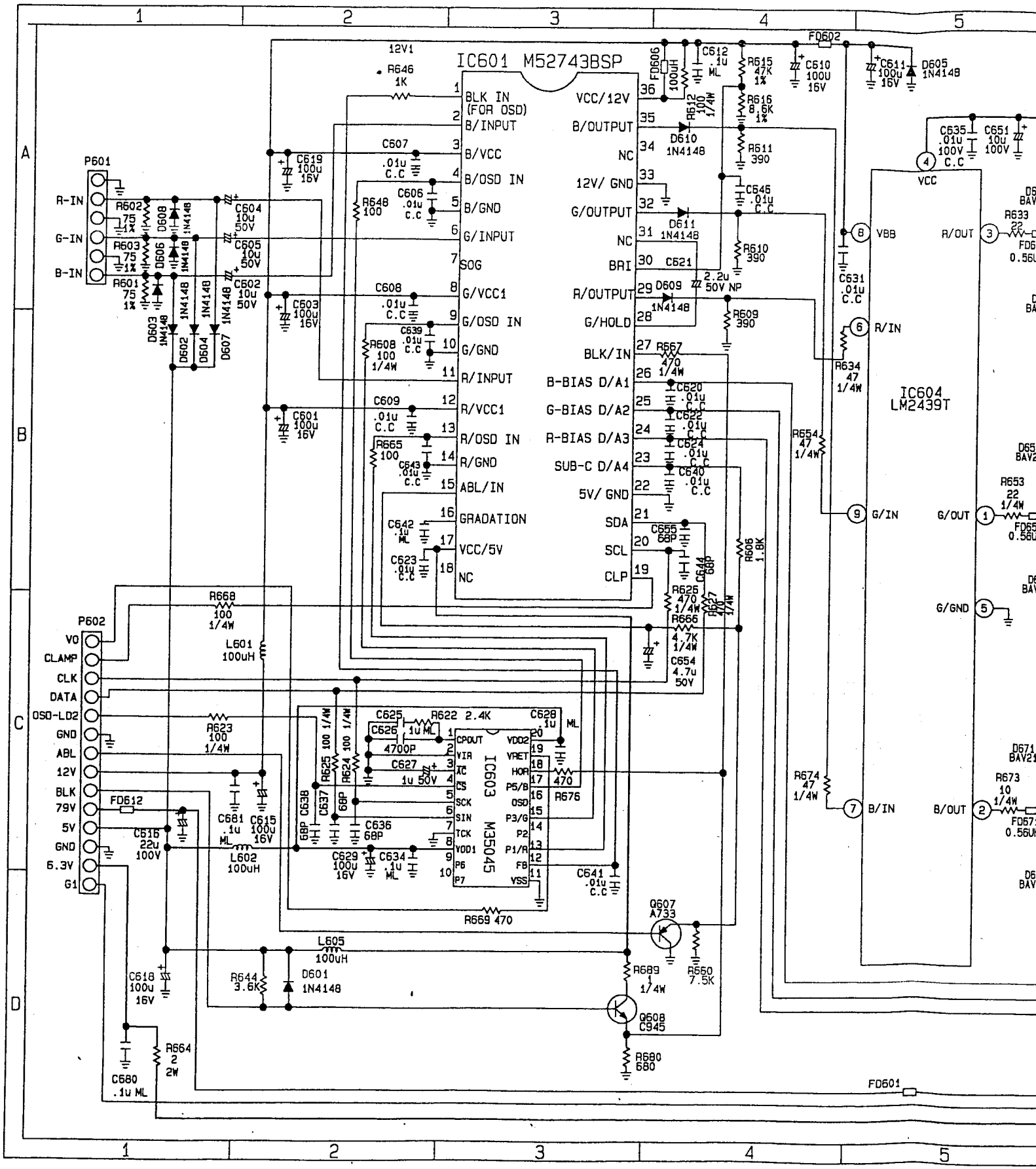
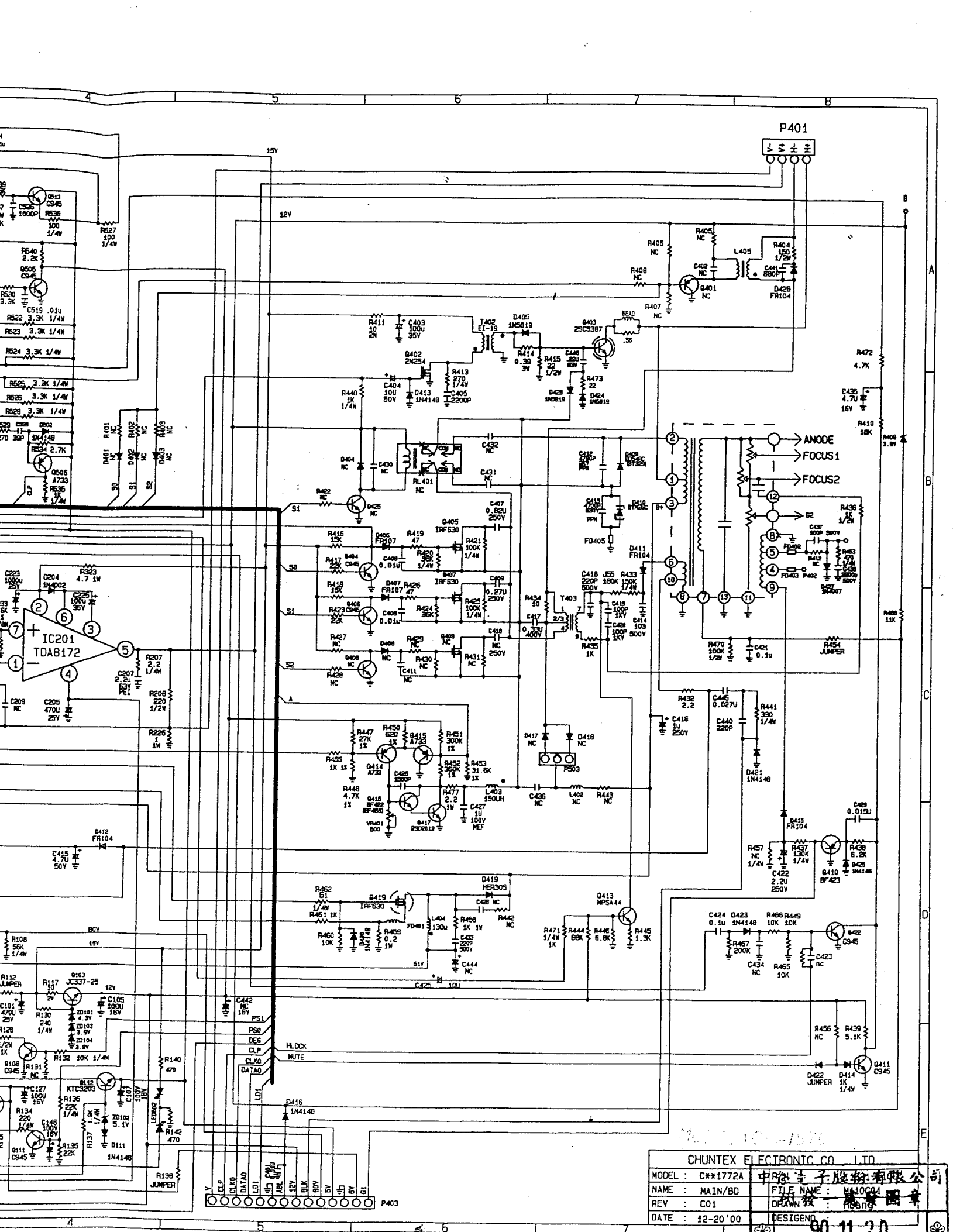
研發一處
90.11
繪圖：陳燦
核准：

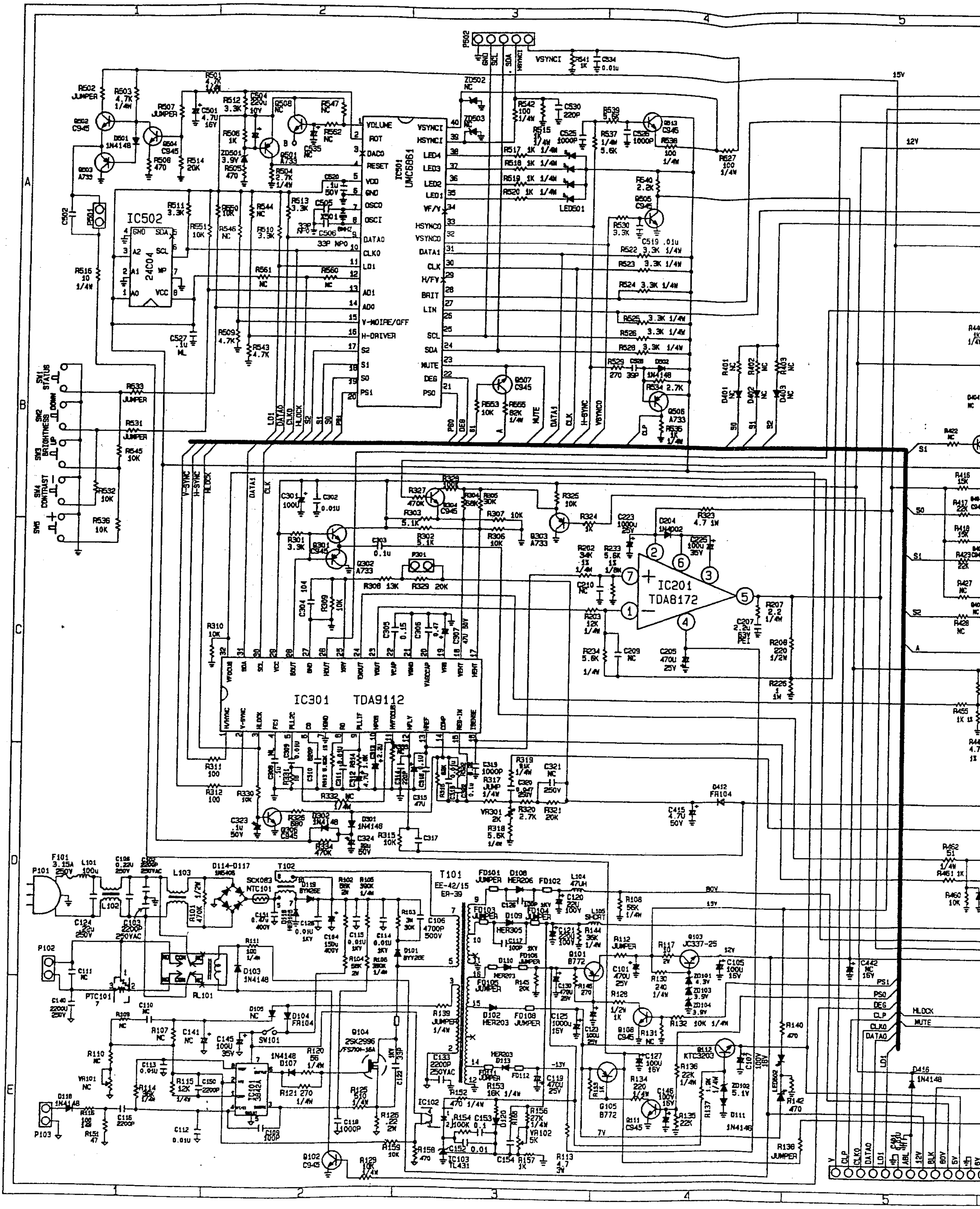


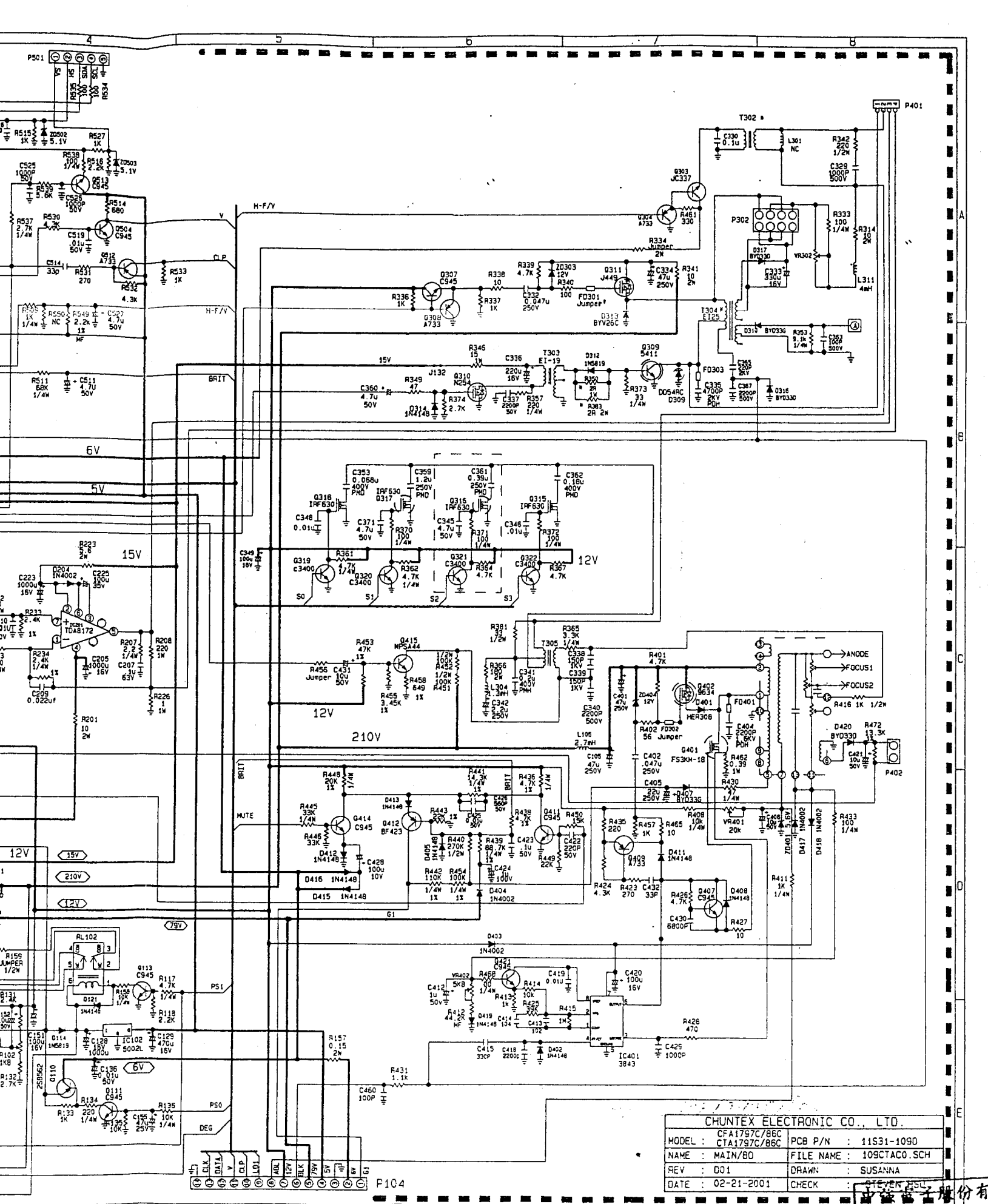
Note: Resistor without specified value are 1/8W type.

All capacitors without specified temperature value are 85c type.

All capacitors not otherwise marked are 50V type.

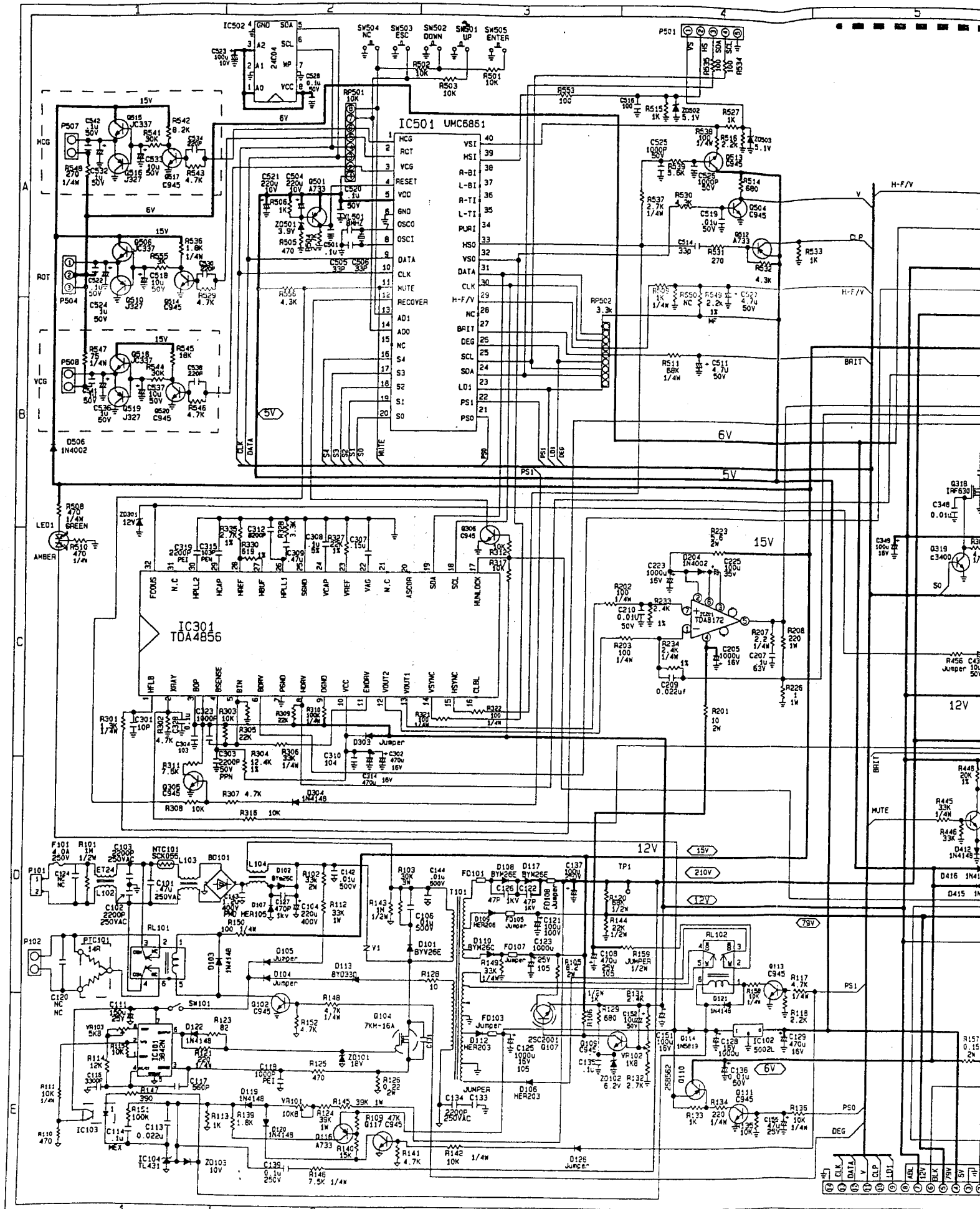

P401
ANODE
FOCUS1
FOCUS2
IC201
TDA8172
T402
EI-19
T403
RL401
P503
P403
CHUNTEX ELECTRONIC CO. LTD
MODEL : C**1772A
NAME : MAIN/BD
REV : C01
DATE : 12-20'00
FILE NAME : MA10C01
DRAWN : Huang
DESIGEND
90.11.20
CHP1772A / CNP1772A
(EX700F)


IC502
24C04
IC501
UMC5861
IC301 TDA9112
IC201
TDA8172
T101
EE-42/15
ER-39
T102
IC101
IC102
IC103
TL431
RL101
PTC101
P101
P102
P103
P301
P501
P502
SW1 STATUS
SW2 DOWN
SW3 BRIGHTNESS UP
SW4 CONTRAST
SW5
SW101
LED501
LED502
15V
12V
80V
VSYNCI
HSYNCI
HLOCK
MUTE
DEG
CLP
CLK0
DATA0
PS1
PS0
S0
S1
S2



* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

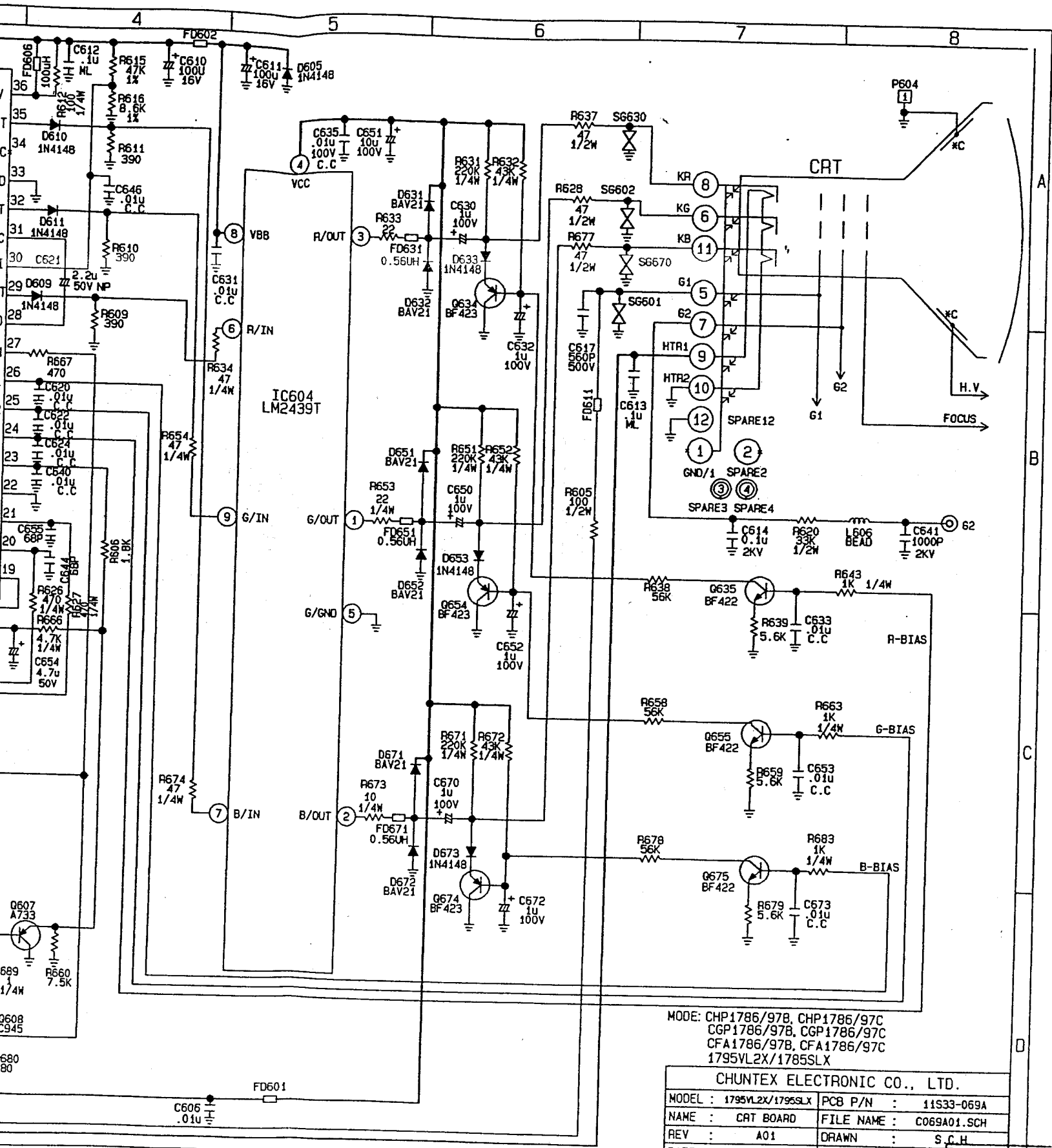
CHP1786C / CNP1786C (EX705F)



* MARKING ARE
* SOME COMPON

CH

EX705R CH



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

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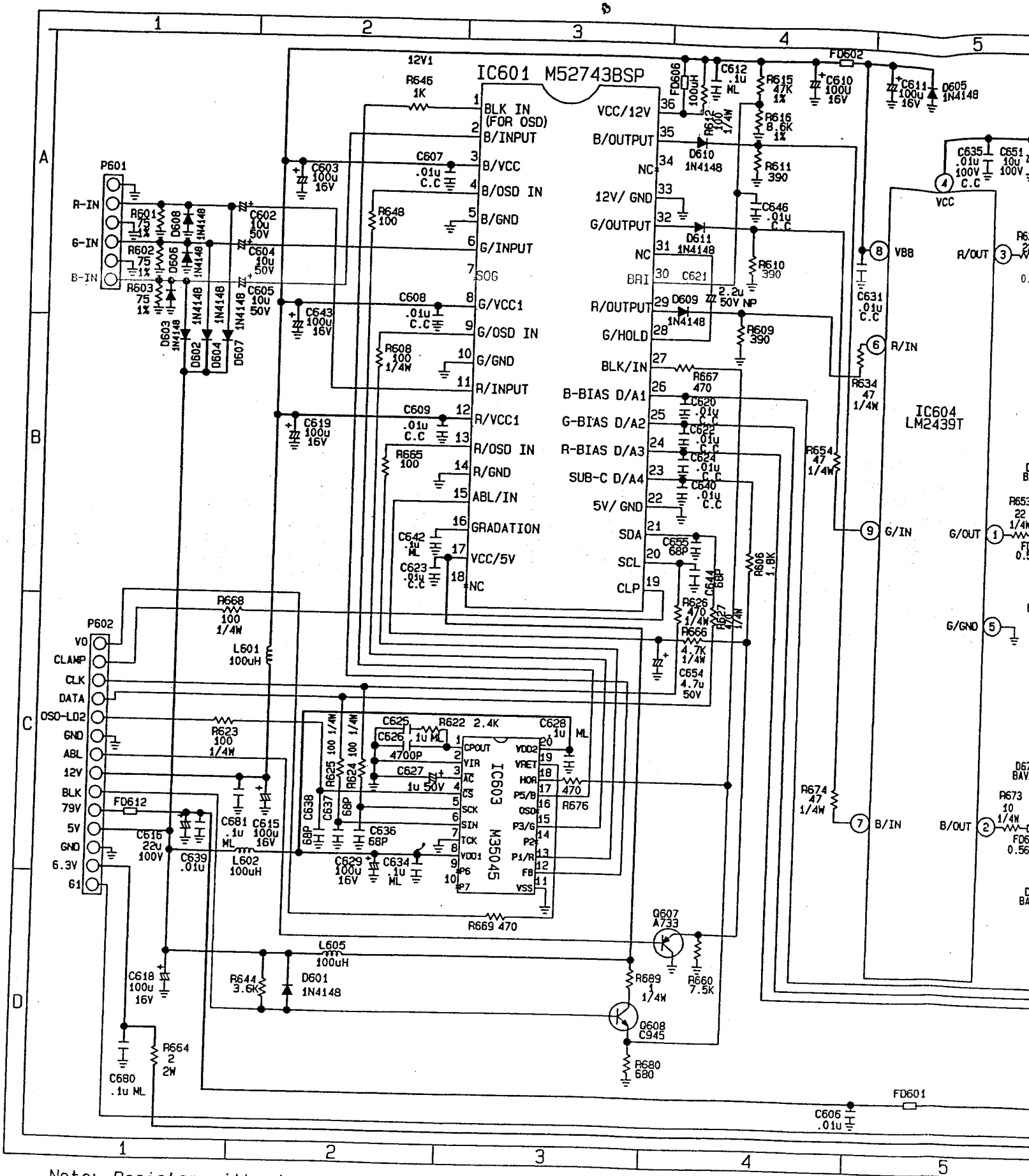
繪圖:
核准:

e are 85c type.

CHP 1786/CHP 1786C
(EX 705F)



Note: Resistor without specified value are 1/8W type.

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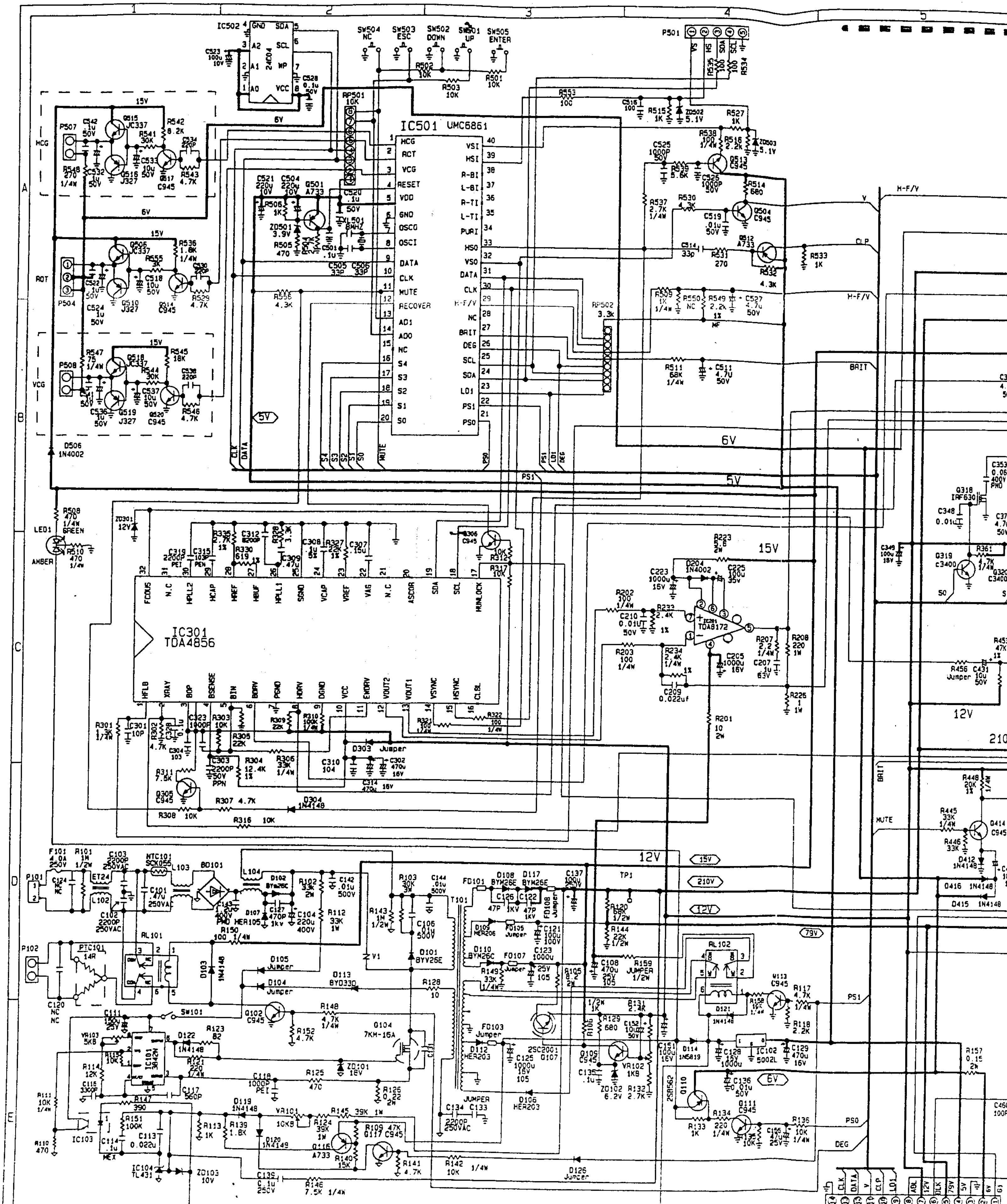
CHUNTEX ELECTRONIC CO., LTD.			
MODEL :	CFA1797C/86C CTA1797C/86C	PCB P/N :	11S31-1090
NAME :	MAIN/BD	FILE NAME :	109CTAC0.SCH
REV :	001	DRAWN :	SUSANNA
DATE :	02-21-2001	CHECK :	STEVEN HSU

* MARKING AREAS ARE FOR CTA1797C.
* SOME COMPONENETS' VALUES MAYBE NOT UPDATE, PLEASE CHECK EXACT VALUE FROM BOM

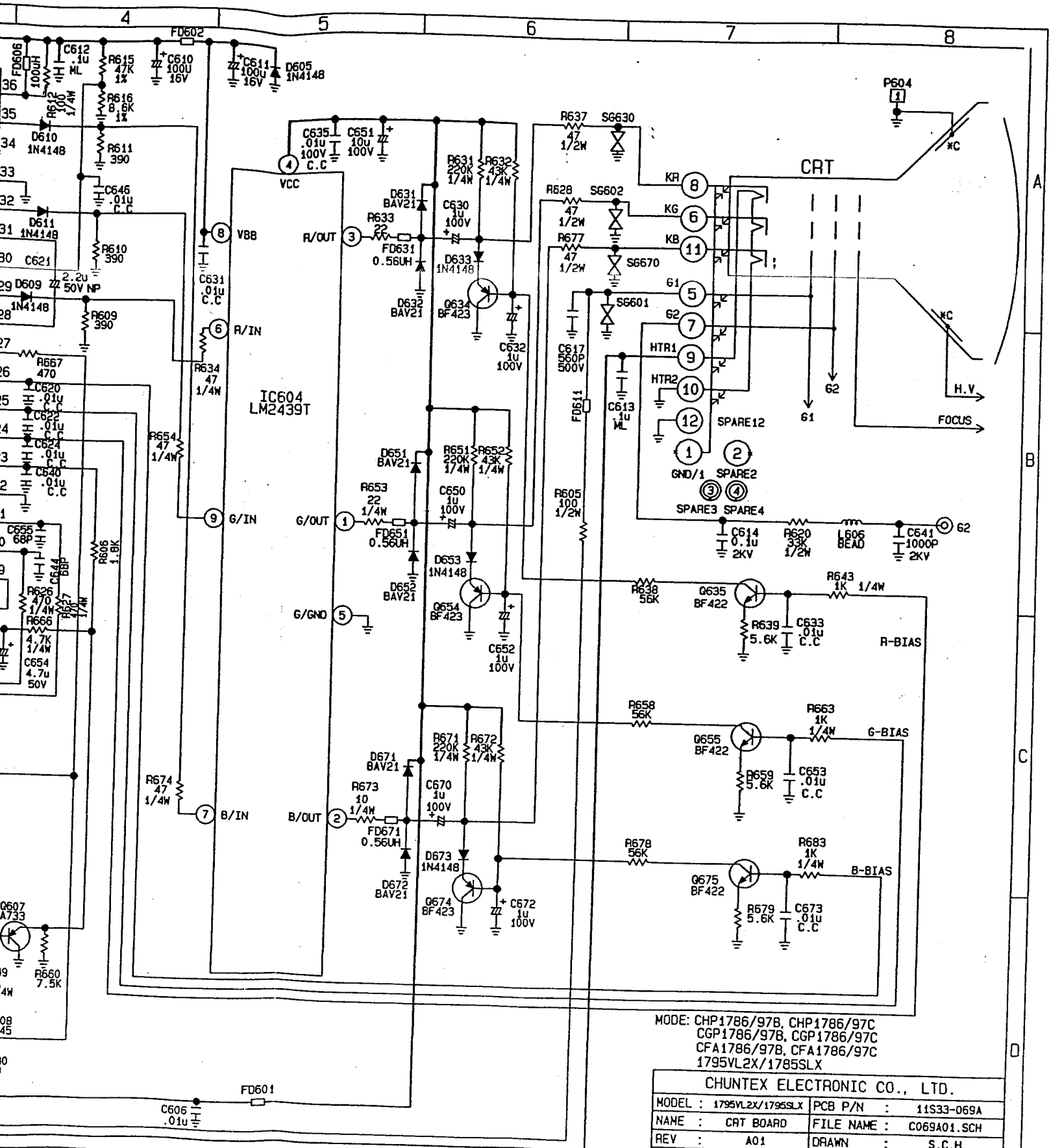
CHP 1797C / CK2 1797 / CMP 1797
(CX710F)

中強電子股份有限公司
研發一處發圖
90.11.20
繪圖：陳煤榮 REV
核准：



* MARKING AREAS
* SOME COMPONENE

EX 710F CHP



MODE: CHP1786/97B, CHP1786/97C
CGP1786/97B, CGP1786/97C
CFA1786/97B, CFA1786/97C
1795VL2X/1785SLX

CHUNTEX ELECTRONIC CO., LTD.			
MODEL : 1795VL2X/1795SLX		PCB P/N :	11S33-069A
NAME : CRT BOARD		FILE NAME :	C069A01.SCH
REV : A01		DRAWN :	S.C.H
DATE : 09-22-'00		CHECK :	

中強電子股份
研發一處
90. 11. 2
繪圖:
核准: 陳榮榮

are 85c type.

CHP 1797C/CK21797C/CNP1797
(EX710F)